The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 640.---Vol. XVII. LONDON, SATURDAY, NOVEMBER 27, 1847. [Price 6d.

Stannaries of Cornwall—In the Vice-Warden's Court.

CARTHEW *v.* PARKE.

IN THE MATTER OF NORTH TREBURGET MINE.

WHEREAS, the VICE-WARDEN did, by an Order, or Decree, made in the above-mentioned cause, and bearing date on the 9th day of November, 1847, ORDER and DECREE that a SALE be made of the ORES, and, if necessary, the ENGINES, MACHINERY, and MATERIALS upon and belonging to the NORTH TREBURGET MINE, in the parish of SAINT TEATH, within the said Stannaries, under the direction of the Registrar of the Court, and that the proceeds of such sale should be applied, by the said Registrar, in the manner directed by the said Order, or Decree.

Notice is hereby given, that, pursuant to the said Order and Decree, a PUBLIC AUCTION will be HOLDEN on the NORTH TREBURGET MINE aforesaid, on Wednesday, the 8th day of December next, at Eleven o'clock in the forenoon, for SELLING, either together or in lots, the under-mentioned—

MINING MACHINERY AND MATERIALS—viz:

ONE WATER-WHEEL and RODS, 10 feet diameter, 2 feet abreast; 4 7-inch pumps, a smith's anvil, 30 fms. of 2¼-inch rope, 1 tackle and rope, 1 load of beach timber, miners' tools, miners' chest, whim-cage, &c.

For viewing the same, application may be made to Mr. Martin Teague, at the mine; and for further particulars (if by letter, post-paid), to Messrs. Hodge and Hockin, solicitors, Truro.—Dated the 24th day of Nov., 1847.

Stannaries of Cornwall—In the Vice-Warden's Court.

PURSUANT to a DECREE of the VICE-WARDEN'S COURT, made in the cause of CARTHEW *v.* PARKE, the CREDITORS, in respect of NORTH TREBURGET MINE, in the parish of SAINT TEATH, within the said Stannaries, are, on or before the 8th day of December next, to come in and PROVE their DEBTS before the Registrar of the said Court, at his office, in Truro; in default thereof, they will be excluded the said Decree.

Dated Registrar's Office, Truro, 24th day of Nov., 1847.

LAST DAY'S SALE OF THE VALUABLE MINE MATERIALS AND COUNTING-HOUSE FURNITURE, AT TREWOLLACK MINE.

MR. TIPPET will SELL, BY PUBLIC AUCTION, on Monday, the 6th of December next, at Ten o'clock in the forenoon precisely, at TREWOLLACK MINE, in the parish of ST. COLUMB MINOR, the remainder of the

VALUABLE MINE MATERIALS THEREON—viz:

1 22-inch ROTATORY ENGINE, with boiler, about 10 tons; 18 13-inch pumps, 2 12-inch working barrels, 2 12-inch doorpieces, 2 13-inch windbores, 12-inch matching-piece, 2 12-inch brass seatings, 1 brass valve, windbores, working barrel, doorpiece, part of a 5-inch plunger-lift, caps, plates and pins, strapping plates, several fathoms of ladders, ditto fathoms of launders, capstan and whim-ropes and chains, kibbles, old and new brass, hemp, yarn, new and old iron, a quantity of excellent timber, COUNTING-HOUSE FURNITURE, and miscellaneous effects.

The whole of the foregoing is almost new, in excellent condition, and will be peremptorily sold on the above day.

For a view thereof, apply to the agent, at the mine; and for further particulars, at the office of Mr. Tippet, Pydar-street, Truro.—Dated Nov. 24, 1847.

AYRSHIRE.—TO BE LET, the COAL, IRONSTONE, and FIRE-CLAY, in the ESTATE of WATERHEAD, lying in the parish of NEW CUMNOCK, the property of Sir John Cathcart, Bart. This estate is in the vicinity of the Nithsdale Iron-Works, now being erected, on the one side, and of the Dalmellington Iron-Works, on the other; and it is believed the BLACK-BAND IRONSTONE, which is found in the estates of the Marquis of Bute, Craigangillan and Afton, adjoining, passes under about 1500 acres of Waterhead lands. There are also CLAY-BAND IRONSTONE and LIMESTONE in the property, and SMITHY COAL is now working within it. The Glasgow and Carlisle Railway, now in course of being made, passes within 3 miles of the lands.

There are various FIELDS of MINERALS in ESTATES adjoining, and in the near neighbourhood, now TO BE LET, so that any company, of skill and capital, would have ample scope for establishing iron-works on a large scale.

A plan of the estate, and general section of the minerals, with samples of the ironstone, will be seen on application to John Geddes, Esq., mining engineer, No. 49, Albany-street, Edinburgh; Arthur Campbell, W.S., No. 22, Dublin-street, Edinburgh; or Mr. Kennedy Brown, writer, Girvan—either of whom will receive offers for a lease.

Wm. Gemmell, residing at Meikiehill, on the estate, will point out the boundaries of it.

COLLIERY TO LET, IN SOUTH WALES.—A compact COLLIERY TO BE LET, with immediate possession, situate within three miles of the harbour and floating dock at Llanelly, with which it is connected by a public and private railroad from the pit's mouth, intersecting the line of the South Wales Railway, which also passes about a quarter of a mile from the pit. The Spitty Copper-Works, adjoining the pit, at a distance of a few fields length, have been very recently taken by a new company, who are just now commencing operations there. Easy access to these works may be had from the pit, entirely over the land of the owner of the colliery.

There are two engines, one of about 40, and the other 10-horse power, for pumping and lifting. The shaft, in depth, is about 40 fathoms, passing through two veins of coal—one of which only has been partially worked, for the purpose of proving the qualities of the coal, which is in high repute, as being excellent for copper-works, steam, smiths, and other purposes. Another (third) vein of coal has been proved, by boring about 18 fms. deeper than the present pit; and there are other veins to be had, at a still greater depth.

The engines, plant, &c., to be taken at a given sum, or by valuation, as may be agreed upon.—For further particulars, apply (by letter, pre-paid) to Benjamin Jones, Esq., solicitor, Llanelly, Carmarthenshire.

STRONG MIXING PIG-IRON.—The YSTALYFERA IRON COMPANY beg to solicit ORDERS for their ANTHRACITE PIG-IRON. This iron mixes well with Scotch pig—imparting to it strength and elasticity, and receiving from it a portion of its softness and fluidity. No. 3 Pig is recommended for mixing with soft iron—Nos. 1 and 2, for machinery castings, requiring great soundness and strength. At this period, when cast-iron is so much employed in the construction of bridges and other buildings, requiring all the strength and elasticity which the best mixture of metal will afford, it may be interesting to call attention to the characteristics of ANTHRACITE PIG-IRON, as REPORTED on by that great practical authority, the late DAVID MUSHET, Esq., M.I.C.E.:—

"It greatly exceeds, in *strength*, in *deflective* powers, and capacity to resist *impact*, any iron at this time manufactured in the United Kingdom."

"It now only remains for me to mention a property peculiar to this iron, which was noticed at the time I made the trial experiments, four years ago, but which has been more fully developed in those more recently made. The property referred to is one of *great springiness*, or *elasticity*, which communicates a tendency to the bar, in deflecting and breaking, to resume its rectangular form. Bars that had obtained a permanent set of 2-10ths, when afterwards broken, presented but a slight deviation from a right line; and in no case, did the curvature exceed one-fourth of a tenth."

"It was also remarked, that most of the fractures, in breaking, presented a *regularity of grain* throughout, resembling the structure of *unhardened steel*."

Address THE YSTALYFERA IRON COMPANY,

Dated June 22, 1847. *Near NEATH, SOUTH WALES.*

HOT-BLAST WITHOUT COAL, LABOUR, OR REPAIRS.

DIXON AND BUDD'S PATENTS.

Apply for particulars, or to inspect the process in operation on six blast-furnaces, to J. Palmer Budd, Esq., Ystalyfera Iron-Works, near Neath.

Dated June 22, 1847.

PATENT GALVANISED IRON AND WIRE ROPE WORKS,

MILLWALL, POPLAR.

ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £20, under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging.

ADCOCK'S PATENT SPRAY PUMP.—This important INVENTION having been PERFECTED, and brought into SUCCESSFUL PRACTICAL OPERATION at LLANHIDDEL, at pits belonging to R. J. Blewitt, Esq., M.P., Llantarnam Abbey, near Newport, Monmouthshire, the PATENTEE is ready to RECEIVE, and to execute, ORDERS.—Apply to Henry Adcock, C.E., at his offices, 137, Strand, London, where pamphlets, descriptive of the invention, may be had; at the office of the *Mining Journal*, 26, Fleet-street; and through any respectable bookseller—price 1s.

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,

23, *HAWLEY-ROAD, KENTISH TOWN, LONDON,*

to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual.

THE PATENT SAFETY FUSE, FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Cambourne, Cornwall.

TO CONTRACTORS AND COLLIERS.—The directors of CAMERON'S COALBROOK STEAM COAL COMPANY are ready to RECEIVE TENDERS for EXCAVATING a further OPEN CUTTING AND EARTHWORK for DRIVING a PLANT, or LEVEL, at the COMPANY'S COLLIERY, at LOUGHOR, near Swansea.—Plans and specifications may be seen at the company's offices here; also, at Messrs. Price and Jenkins', solicitors, Swansea; and with the manager, at the colliery, who will point out the situation of the proposed works.

Sealed tenders to be forwarded to the company's offices here, on or before the 6th Dec. next. By order of the board of directors, A. C. HOWDEN, Sec.

2, Moorgate-street, London, Nov. 22, 1847.

SWANSEA DOCK COMPANY.—The directors of this company having observed, in the Swansea newspapers, an advertisement, calling an Extraordinary General Meeting of the shareholders, to be held at Swansea, on Thursday, the 2d day of December next, hereby give Notice, that the parties calling the same not being directors, and George Grant Francis, by whom the advertisement is signed, not being the secretary of the company, the said MEETING has been ILLEGALLY CONVENED, and all proceedings thereat will be absolutely null and void.

All communications from shareholders or others respecting the business of the company, are hereby directed to be addressed to the secretary, at the company's offices, No. 3, Lothbury, London. By order of the board of directors,

3, Lothbury, London, Nov. 24, 1847. A. C. HOWDEN, Secretary.

BIRMINGHAM AND OXFORD JUNCTION RAILWAY COMPANY.—FURTHER CALL OF FIVE POUNDS PER SHARE.—The directors having made a further CALL of FIVE POUNDS per share upon the respective shareholders in this undertaking, PAYABLE on the 20th day of December now next, Notice is hereby given, that the shareholders are required to pay such call on the said 20th day of December now next, to the persons and at the places hereinafter named, or some or one of them (that is to say):—

To the Birmingham Banking Company, at their bank in Birmingham.
To Messrs. Attwoods, Spooner, and Co., at their bank in Birmingham.
To Messrs. Jones Loyd and Co., at their bank in Lothbury, London.
To Messrs. Spooner, Attwoods, and Co., at their bank in Gracechurch-street, London.
To Messrs. Moss and Co., at their bank in Liverpool.

And, in default of payment being so made, the shareholders making such default will be charged interest, at the rate of £5 per centum per annum, from the last-mentioned date, until the call is actually paid.

A circular will be sent to each shareholder, which must be deposited at the bankers', when the call is paid. By order of the board of directors,

34, Bennett's-hill, Birmingham, Nov. 19, 1847. JOHN W. KIRSHAW, Sec.

CALEDONIAN RAILWAY—LOANS ON DEBENTURES

The CALEDONIAN RAILWAY COMPANY are prepared to RECEIVE TENDERS OF LOANS ON DEBENTURES in sums of not less than £500, for three or five years—bearing interest at the rate of 5 per cent. per annum, payable half-yearly, in Edinburgh, Glasgow, London, Liverpool, Manchester, or Bristol.

Tenders to be addressed to this office. Parties may also communicate personally with Messrs. Foster and Braithwaite, 68, Old Broad-street, London.

By order of the directors, D. RANKINE, Treasurer.

Caledonian Railway Office, 122, Princes-street, Edinburgh, March 26, 1847.

CAMERON'S COALBROOK STEAM COAL & SWANSEA AND LOUGHOR RAILWAY COMPANY.

REGISTERED AND INCORPORATED.

Notice is hereby given, that, in pursuance of a resolution of the board of directors, the proprietors of shares in the above company are hereby required to PAY a CALL of TWO POUNDS on each of their respective shares, on or before the 15th day of January next, at this office. Interest, at the rate of 5 per cent. per annum, will be charged upon all calls remaining unpaid from and after the day above-mentioned; and all shares on which such call shall not be paid, are liable to forfeiture, according to the provisions of the Deed of Settlement. By order of the board of directors,

Offices, 2, Moorgate-street, London, Nov. 12, 1847. A. C. HOWDEN, Sec.

N.B.—It will be necessary to produce the certificates of shares, that the indorsement of the payment may be made thereon.

COMMERCIAL ELECTRIC TELEGRAPH.—The only really COMMERCIAL TELEGRAPH is that which may be used for ALL PURPOSES, without restriction—upon which terms Messrs. BRETT & LITTLE are prepared to GRANT LICENSES for their ELECTRO-TELEGRAPHIC CONVERSER.

For tickets to inspect, apply to BRETT & LITTLE, Furnival's Inn, London.

ELECTRIC TELEGRAPH COMPANY,

LONDON, 345, STRAND, September 1, 1847.

COMMERCIAL TELEGRAPH.

The works of the lines for commercial communications, between the places enumerated below, embracing a SYSTEM of TELEGRAPHS for COMMERCIAL PURPOSES only, and distinct from that reserved for the special use of railways, being so far advanced as to admit of their completion by the commencement of the coming year, the directors think that the time has now arrived, when it becomes their duty to make known the arrangements which they contemplate for the accommodation of the public.

STATIONS will BE OPENED, in central situations, in the PRINCIPAL TOWNS, whence MESSAGES and DISPATCHES will be FORWARDED TO, and RECEIVED FROM, all the OTHER STATIONS of the ELECTRIC TELEGRAPH COMPANY.

In order to give to Merchants, Bankers, Manufacturers, and all connected with trade, the greatest possible amount of information, a ROOM will be RESERVED in each of the COMPANY'S STATIONS for SUBSCRIBERS, in which will be received, tabulated, and exhibited, all Intelligence of Commercial or Public Interest—for instance:

SHIP LISTS, from the various Ports.
SHARE LISTS, from the various Exchanges.
PRICES CURRENT.
STOCK EXCHANGE LISTS.
CORN MARKETS, from the various Towns.
PRICES OF LIVE STOCK, &c. &c.

In LONDON, a CENTRAL STATION, suited to the importance of the metropolis, is in COURSE OF ERECTION, in the immediate vicinity of the Bank and Royal Exchange: in this Station the whole TELEGRAPHIC NEWS of the COUNTRY will be CONCENTRATED, and FORWARDED in EVERY DIRECTION. And here, as in other towns, a ROOM will be RESERVED for SUBSCRIBERS.

The SUBSCRIPTION to these ROOMS will be TWO GUINEAS per annum, paid in advance, which will entitle SUBSCRIBERS to the RIGHT of ENTRANCE to ALL the SUBSCRIPTION ROOMS of the COMPANY—including the Central Station at London.

The foregoing details some of the advantages of the Commercial Telegraph to subscribers; but the requirements of the public in general will be provided for by the establishment of offices, which will at all times be open for the reception and transmission of messages and dispatches; while messengers will be kept at the various stations, by whom dispatches may be sent out to any part of the town where the communication has been received by Telegraph at the Company's Station.

Subscribers' Names are received at the Commercial Telegraph Office, where any further information may be obtained.

The following are the Towns to which the Commercial Telegraph will be first extended:—

London	Chester	Southampton	Derby	Darlington
Margate	Liverpool	Winchester	Nottingham	Newcastle
Ramsgate	Rotherham	Dorchester	Lincoln	Berwick
Deal	Barnsley	Bristol	Chesterfield	Edinburgh
Dover	Wakefield	Gloucester	Sheffield	Glasgow
Folkestone	Leeds	Cheltenham	Bradford	Scarborough
Canterbury	Halifax	Peterborough	Wisbeach	Bridlington
Northampton	Rochdale	Yarmouth	Lowestoft	Stamford
Coventry	Hull	Huntingdon	Cambridge	Norwich
Birmingham	Maidstone	Hertford	Chelmsford	St. Ives
Wolverhampton	Tonbridge	Manchester	Ipswich	Ware
Stafford	Gosport	Leicester	York	Colchester

J. LEWIS RICARDO, Chairman.

IMPORTANT TO RAILWAY AND STEAM NAVIGATION COMPANIES, MANUFACTURERS, AND ENGINEERS.

W. BROTHERTON AND CO.'S

PATENT LUBRICATING FLUID (or Animal Oil) FOR ALL DESCRIPTIONS OF MACHINERY.

W. B. & CO. have the pleasure to state, that the above article is extensively used in her Majesty's Steam Navy, and by several of the principal Steam Navigation and Railway Companies, and is pronounced by them, and by the first practical engineers of the day, to be far better adapted for the purposes of lubrication than any other article hitherto used for such purposes. The Patent Lubricating Fluid is equally applicable for the most intricate and fine pieces of machinery, as for the heaviest bearings of the steam-engine. It is cheaper, much more economical, and cleaner than oils at present in use; is free from smell, and calculated to effect a vast saving in the expenditure of working steam powers.

Further particulars can be had, and testimonials seen, by application to the manufacturers, W. BROTHERTON & CO., Hungerford Wharf, Strand, London.

N.B.—The above article will burn in lamps, and give a light equal to the best sperm oil.

FLEXIBLE HOSE-PIPES FOR LOCOMOTIVE ENGINES, RAILWAY CRANES, FIRE-ENGINES, GAS, &c.

PATENT VULCANISED INDIA-RUBBER HOSE-PIPES AND TUBING OF EVERY DESCRIPTION.

These pipes are made to stand hot-water without injury—are very superior to leather pipes, or the common india-rubber pipes; and, as they do not become hard or stiff in the lowest temperatures, or require any application when out of use, are particularly well adapted for fire-engines.

FLEXIBLE TUBING, of every description, for gas, chemical purposes, &c.

VULCANISED INDIA-RUBBER WASHERS, all sizes, for steam and hot-water joints, &c.—Sole manufacturer, JAMES LYNE HANCOCK,

Gorwell Mews, Gorwell-road, London.

WANTED, by a competent person, who has had much experience in large collieries, a SITUATION as COLLIERY VIEWER.—Address "X.," Post-office, Newcastle-on-Tyne.

IRON TRADE.—A GENTLEMAN, holding a long LEASE on a MINERAL PROPERTY, the mines of which can be obtained very extensively, and at reasonable rates, for the MANUFACTURING OF IRON, is desirous to meet with a PARTNER, to enable him to ERECT IRON-WORKS to consume such minerals, in addition to a land sale colliery, now in operation. This property is connected by a branch with one of the principal railways in the north, and very extensive iron-works are in the neighbourhood.—For particulars apply by letter (post-paid), directed to "P. W.," Post-office, Ruabon, Denbighshire.

TO IRONMASTERS—BLOWING-ENGINE FOR SALE.—A CONDENSING ENGINE, steam cylinder, 30-inch diameter; blowing cylinder, 52-inch diameter; length of stroke, 7 feet: in good order—has been worked four years.—Apply to Mr. Joseph Bowman, Pembrey, near Llanelly, Swansea.

FOR SALE, a 70-inch cylinder ENGINE, without boilers.—For price, and further particulars, please apply to Samuel Grose, Esq., engineer, Wall, Gwinear, Camborne.

STEAM-ENGINES.—From 8 to 20-horse power ENGINES ALWAYS IN STOCK.

Apply to Mr. CAPPER, Engine-Maker and Founder, BIRMINGHAM.

Price—£12 to £16; with boiler, £22 per horse.

ROSE-IN-VALE CONSOLS MINE.—FOR SALE, TWO (132da) SHARES in ROSE-IN-VALE CONSOLS MINE, situate in PERRANZABULOE, CORNWALL.—Apply to Mr. Harvey, Daniel-street, Truro.

CROKER, CLEMENT, & CO., CUSTOM-HOUSE, SHIP, STOCK, AND SHARE BROKERS, AUCTIONEERS AND APPRAISERS, ACCOUNTANTS, HOUSE, ESTATE, AND GENERAL COMMISSION AGENTS,

No. 33, WHIMPLE-STREET, PLYMOUTH.

(Next door to the Naval Bank.)

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS.

MR. H. B. RYE, 80, OLD BROAD-STREET, begs to call the attention of his friends and capitalists to CORNISH MINES, yielding, upon the present purchase, from £15 to £35 per cent.

MR. R. TREDINNICK, MINING AGENT AND DEALER IN EVERY DESCRIPTION OF SHARES.

THREE KINGS COURT, LOMBARD-STREET, LONDON.

JAMES LANE, MINING SHARE DEALER,

75, OLD BROAD-STREET, LONDON.

BRITISH MINING OFFICES, No. 12, HAYMARKET, And No. 41, MOORGATE-STREET, LONDON,

And No. 4, STAMP-OFFICE BUILDINGS, MANCHESTER.

At either of which places PROSPECTUSES and SHARES in the various SILVER-LEAD and COPPER MINES connected with these offices, may be obtained.

T. H. TAUNTON, London.
W. SHEARMAN, Manchester.

ORIGINAL REGISTRY OFFICE, FOR THE SALE AND PURCHASE OF MINING SHARES.

No. 28, THREADNEEDLE-STREET, LONDON.

CROSSMAN, SOMMERS, AND CO., AGENTS.

SHARES FOR DISPOSAL.

Wheal Ann (Bridford)	East Birch Tor (Dartmoor)	South Wh. Sophia (Saltash.)
Coombe Mine	Great Wh. Rough Tor Con.	Wheal Susan
North Wheal Camel	Princess Royal (St. Agnes)	Victoria Tin Mining Co.
New East Crowndale	Pennant	Wheal Louisa
Wheal Essa (Saltash)	North Wheal Robert	&c. &c. &c.

MONEY.—MESSRS. WINSTANLEY & CO., Sharebrokers, inform their friends and the public, they make IMMEDIATE ADVANCES, to any amount, on the deposit of English and Foreign Railway Shares, Scrip, and Debentures, upon exceedingly advantageous terms: they also BUY and SELL every description of STOCK and MINING SHARES, at much less commission than usually charged.

6, Bank Chambers, opposite the Bank of England.

ALLIANCE GAS COMPANY.—Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the proprietors of the ALLIANCE GAS COMPANY will be HELD at the house, or office, of the company, situate No. 39, Finsbury-circus, in the city of London, on Tuesday, the 14th day of December next, at Two o'clock in the afternoon precisely, for the purpose of assenting to, or dissenting from, the dissolution of the company; and also to consider what further division of the assets of the company may be made.—Dated this 26th day of Nov., 1847.

By order of the board of directors, J. B. GREAVES, Secretary.

ANGLO-MEXICAN MINT OFFICE, 5, Broad-street-buildings, London-bridge, Nov. 26, 1847.—Notice is hereby given, that the HALF-YEARLY DIVIDEND, declared at the annual general meeting of shareholders, held on the 4th May last, will be PAYABLE on and after the 2d of December next; claims to be made, and certificates presented, three clear days previous to payment.—Printed form of claim to be obtained at the office.—Hours of attendance Eleven to Three.

G. B. LONSDALE, Secretary.

AUSTRALIAN MINING COMPANY, 1, Adelaide-place, London-bridge, Nov. 22, 1847.—The board of directors hereby give Notice, that an EXTRAORDINARY GENERAL MEETING of the shareholders will be HELD at the company's offices, 1, Adelaide-place, London-bridge, on Monday, the 13th day of December next, at Twelve o'clock precisely, to receive the directors' report on the present condition of the company, and to fill up the vacancies occasioned in the direction, by the resignation of Sir Hyde Parker, Bart., and the decease of Samuel James Capper, Esq.

G. E. HODGKINSON, Secretary.

CASCADE MINE.—At a General Meeting of the shareholders in the CASCADE MINE, held at the British Mining Offices, 41, Moorgate-street, London, pursuant to notice, on Wednesday, the 24th day of November, 1847,

G. W. BLANCH, Esq., in the chair.

The report of the finance committee having been read, and the statement of accounts produced (being previously audited)—

It was moved by Mr. Shearman, seconded by Mr. Read, and resolved unanimously,—

That the report of the finance committee be adopted, and, together with the statement of accounts, be printed and circulated among the shareholders.

G. W. BLANCH, Chairman.

That the thanks of this meeting be given to the chairman, for his able conduct in the chair. THOS. HENRY TAUNTON, Secretary.

GADAIR MINE.—At a General Meeting of the shareholders in the GADAIR MINE, held at the British Mining Offices, 41, Moorgate-street, London, pursuant to notice, on Wednesday, the 24th day of November, 1847,

G. W. BLANCH, Esq., in the chair.

The report of the finance committee having been read, and the statement of accounts (which had been previously audited) produced—

It was moved by Mr. Shearman, seconded by Mr. Molyneux, and carried unanimously,

That the report of the finance committee be adopted, and, together with the statement of accounts, be printed and circulated among the shareholders.

G. W. BLANCH, Chairman.

That the best thanks of the meeting be given to the chairman, for his able conduct in the chair. THOS. HENRY TAUNTON, Secretary.

WHEAL BARBARA MINE.—At a General Meeting of the shareholders in the WHEAL BARBARA MINE, held at the British Mining Offices, 41, Moorgate-street, London, pursuant to notice, on Wednesday, the 24th day of November, 1847. G. W. BLANCH, Esq., in the chair.

The report of the finance committee, with the statement of accounts (being previously audited), were read—

It was moved by Mr. Shearman, seconded by Mr. Truscott, and unanimously resolved,—

That the report of the finance committee, together with Capt. Stephens's report, and the statement of accounts, be entered in the "Cost-book," and printed, and forwarded to each shareholder. G. W. BLANCH, Chairman.

That a vote of thanks be given to the chairman, for his able conduct in the chair. THOS. HENRY TAUNTON, Secretary.

THE COPPER MINES OF AUSTRALIA.

Lately published, in 1 vol., 8vo., with maps and plates,

SOUTH AUSTRALIA AND ITS MINES:

BY FRANCIS DUTTON, Esq.

"This is the only publication that has given an account of the mines."—*Australian paper.*

"South Australia and its mines are now objects of great interest, and Mr. Dutton's plain unadorned recital, contains just what the intending emigrant, or the mercantile inquirer, will rejoice at having placed within his reach."—*Colonial Gazette.*

T. and W. Boone, publishers, 29, New Bond-street, London.

NATIONAL LOAN FUND LIFE ASSURANCE SOCIETY,

26, *CORNHILL, LONDON.*

Capital £500,000.—Empowered by Act of Parliament.

This institution embraces important and substantial advantages with respect to Life Assurances and Deferred Annuities. The assured has, on all occasions, the power to borrow, without expense or forfeiture of the policy, two-thirds of the premiums paid (see table); also the option of selecting benefits, and the conversion of his interests to meet other conveniences or necessity.

Assurances for terms of years are granted on the lowest possible rates. 42

DIVISION OF PROFITS.

The remarkable success and increasing prosperity of the society has enabled the directors, at the last annual investigation, to declare a fourth bonus, varying from 35 to 50 per cent. on the premiums paid on each policy effected on the profit scale.

EXAMPLES.

Sum.	Prem.	Year.	Bonus added.	Bonus in Cash.	Permanent reduction of Premium.	Assured may Borrow.
£1000	£29 3 4	1837	£317 15 1	£109 0 11	£16 0 4	£445 0 0
		1838	192 3 0	87 1 4	13 10 2	395 14 1
		1839	165 11 10	74 1 9	11 3 1	346 2 3
		1840	116 7 6	54 0 10	7 18 10	296 13 4
		1841	111 6 8	49 10 0	7 10 4	247 4 8

The division of profits is annual, and the next will be made in December of the present year.

F. FERGUSON CAMROUX, Secretary.

ON NERVOUS DEBILITY & GENERATIVE DISEASES.

—Just published, the Thirtieth Thousand, an improved edition, revised and corrected, 120 pages, price 2s., in a sealed envelope, or forwarded, post-paid, to any address, free from observation, for 2s. 6d., in postage stamps, illustrated with numerous anatomical coloured engravings, "MANHOOD: the Causes of its Premature Decline, with Plain Directions for its Perfect Restoration." A medical essay on those diseases of the generative organs, emanating from solitary and sedentary habits, indiscriminate excesses, the effects of climate, and infection, &c., addressed to the sufferer in Youth, Manhood, or Old Age; with practical remarks on marriage—the treatment and cure of nervous and mental debility, impotency, syphilis, and other urino-genital diseases, by which even the most shattered constitution may be restored, and reach the full period of life allotted to man. The whole illustrated with numerous anatomical engravings on steel, in colour, explaining the various functions, secretions, and structures of the reproductive organs in health and disease; with instructions for private correspondence, cases, &c. 43

By J. L. CURTIS and CO., Consulting Surgeons, 7, Frith-street, Soho-square, London.

REVIEWS OF THE WORK:—"'Manhood:' a medical work. To the gay and thoughtless we trust this little work will serve as a beacon to warn them of the danger attendant upon the too rash indulgence of their passions, whilst in some it may serve as a monitor in the hour of temptation, and to the afflicted as a sure guide to health."—*Scientific.* "We feel no hesitation in saying, that there is no member of society by whom this book will not be found useful—whether such person hold the relation of a parent, a preceptor, or a clergyman."—*Sun, Evening Paper.* "Curtis on Manhood should be in the hands of youth and old age. It is a medical publication, ably written, and developes the treatment of a class of painful maladies which has too long been the prey of the ill-judging and the designing."—*United Service Gazette.*

Published by the authors, and may be had at their residence; sold also by Strange, 21, Paternoster-row; Hannay, 63, Oxford-street; Mann, 39, Cornhill, London; A. Heywood, Hanover-street, Manchester; Philip, South Castle-street, Liverpool: Campbell, 146, Argyle-street, Glasgow; Robinson, 11, Greenside-street, Edinburgh; and, in a sealed envelope, by all booksellers.—Messrs. Curtis and Co. are to be consulted daily at their residence, No. 7, Frith-street, Soho-square, London; and patients can have this work privately forwarded them, by initial or otherwise, to any part of the United Kingdom, direct from the authors' residence; or from any of the above agents, on remitting 2s. 6d. in postage stamps.

The concealed cause that preys on the health and shortens the duration of human life. Illustrated with coloured engravings.—Just published, in a sealed envelope, Price 2s. 6d., or free by post, 3s. 6d.,

CONTROL OF THE PASSIONS: a Popular Essay on the

Duties and Obligations of the Married State—the disqualifying impediments and frequent disappointment of marital anticipations—the physiology, use, and abuse of the sexual organs—injurious results of precocious exertions and excesses—the concealed cause of nervous debility, and the infirmities of the reproductive organs—with advice to those suffering from excessive indulgence in a secret vice, or from infection; and remarks on gonorrœa, gleet, stricture, and syphilis. Illustrated with coloured engravings and cases.

By CHARLES LUCAS & Co., Consulting Surgeons, 60, Newman-street, Oxford-street, London, Member of the London College of Medicine, &c. 44

CONTENTS OF THE WORK.

Chap. 1. Bodily and mental exhaustion induced by inordinate indulgence of the passions—illustrated with coloured engravings.—Chap. 2. Baneful results of a secret vice on the mind and body, evidenced in the production of consumption, epilepsy, and other concomitant diseases. Insanity, idiotcy, moping melancholy, indigestion, stricture, impotence, sterility, with observations on the duties of married life, and on the unhappiness caused by unfruitful unions.—Chap. 3. Debility and exhaustion of the principal vital functions, nature and treatment of impotence and sterility, and the imperfect performance of the marital act, caused by the practice of self-indulgence.—Chap. 4. Gonorrhœa, its symptoms, complications, and treatment; gleet, stricture, and disease of the prostrate.—Chap. 5. Syphilis, and its attendant maladies and treatment. Cases, and concluding observations, plates, &c.

Published by the authors, and sold by Britnall, 54, Paternoster-row; Hannay and Co., 63, Oxford-street, London; J. Gordon, 146, Leadenhall-street; G. Mansell, 115, Fleet-stt.; Sanger, 150, Oxford-street, London; H. Winhall, 78, High-street, Birmingham; H. Whitmore, 119, Market-street, Manchester; J. Howell, 54, Church-street, Liverpool; W. and H. Lawson, 11, Greenside-street, Edinburgh; T. H. Powell, 10, Westmoreland-street, Dublin; and all booksellers.

Persons desirous of obtaining the above work, and not wishing to apply to a bookseller for the same, may, to ensure secrecy, have it direct from the authors, by enclosing 3s. 6d., in postage stamps to that amount.

Home from Ten till Two, and from Five till Eight. Immediate replies sent to all letters containing the fee of £1 for advice, &c.: 60, Newman-street, Oxford-street, London.

MADAME LA'MERT ON THE SECRET INFIRMITIES OF YOUTH AND MATURITY,

With 40 coloured engravings on steel.

Published, and may be had in French or English, in a sealed envelope, 2s. 6d.; or post-free, from the author, for forty-two stamps. 45

SELF-PRESERVATION: A Medical Treatise, on the Physiology

of Marriage, and on the Secret Infirmities and Disorders of Youth and Maturity, as acquired at an early period of life, which enervate the physical and mental powers, wither and enfeeble the natural feelings, and exhaust the vital energies of Manhood; with practical Observations on the Treatment of Nervous Debility, whether arising from excesses, close study, or the influence of tropical climates; local and constitutional diseases, syphilis, stricture, and all diseases and derangements resulting from indiscretion—with 40 coloured engravings, illustrating the Anatomy, Physiology, and Diseases of the Reproductive Organs, explaining their various structures, uses, and functions, and injuries that are produced in them by solitary habits, excesses, and infection.

By SAMUEL LA'MERT, M.D., No. 9, BEDFORD-STREET, BEDFORD-SQUARE, 45

Member of Medicine, Matriculated Member of the University of Edinburgh, Licentiate of the Apothecaries' Hall, London, Honorary Member of the London Hospital Medical Society,

REVIEWS OF THE WORK.

The author of this singular and talented work is a legally qualified medical man, who apparently had considerable experience in the treatment of the various disorders, arising from the follies and frailties of early indiscretion. The engravings are an invaluable adjunct, by demonstrating the consequences of excesses, which must act as a salutary caution to youth and maturity, and by its perusal, many questions may be satisfactorily solved, that admit of no appeal, even to the most confidential friend."—*Era.*

Unquestionably this is a most extraordinary and skilful work, and ought to be extensively circulated; for it is quite evident that there are peculiar habits acquired at public schools and private seminaries, which are totally unknown and concealed from the masters of those establishments, and which cannot be too strongly reprobated and avoided. The engravings that accompany the work are clear and explanatory; and the whole written by a duly-qualified medical practitioner, will, doubtless, be the means of many a youth, as well as those of maturer age, from the various evil consequences arising from early indiscretions."—*Magnet.*

Sold by Kent and Richards, 52, Paternoster-row; Hannay, 63, Oxford-street; Starie, 23, Tichborne-street, Haymarket: Mansell, 115, Fleet-street; Gordon, 146, Leadenhall-street; and by post, for 42 stamps, from the author's residence, who may be consulted personally (or by letter) on these disorders daily, from 10 till 2, and from 5 till 8.

Second edition, enlarged to 196 pages, with 40 Anatomical Coloured Engravings on Steel, On Physical Disqualifications, Constitutional Incapacity, and Impediments to Marriage. New Edition, enlarged to 196 pages.—Just published, price 2s. 6d., or by post, direct from the establishment, 3s. 6d. in postage stamps.

THE SILENT FRIEND: a medical work, on the infirmities

and premature decay of the generative system, from excessive indulgence, infection, and the improper use of mercury, with remarks on marriage, and the means of obviating certain disqualifications, illustrated by 26 coloured engravings. By R. & L. PERRY & Co., 23, Tichborne-street, Haymarket, Oxford-street, London. Published by the authors; sold by Strange, 21, Paternoster-row; Hannay, 63, and Sanger, 150, Oxford-street; Starie, 23, Tichborne-street, Haymarket; and Gordon 146, Leadenhall-street. 46

THE FIRST treats of the anatomy and physiology of the reproductive organs, illustrated by six coloured engravings.—PART THE SECOND treats of the consequences arising from excessive indulgence, and their lamentable effects on the system, producing mental and bodily weakness, nervous excitement, and generative incapacity; it is illustrated by three explanatory engravings.—PART THE THIRD treats of the diseases resulting from infection, either in the primary or secondary form, and contains explicit directions for their treatment. The consequences of neglect, and of the abuse, of mercury are clearly pointed out. This section is illustrated by 17 coloured engravings.—PART THE FOURTH treats of Perry's Preventative Lotion, by the use of which the dangers of infection are obviated. Its action is simple but sure; it combines with the virus checks and destroys its power on the system.—PART THE FIFTH is devoted to the consideration of marriage and its duties. The causes of unproductive unions are also considered, and the whole subject critically and philosophically inquired into.

THE ORDIAL BALM OF SYRIACUM is exclusively employed in treating nervous debility, impotence, &c., 11s. and 33s. per bottle.—THE CONCENTRATED ACTIVE ESSENCE, an anti-syphilitic remedy, for purifying the blood in cases of secondary symptoms, eruptions, and the abuse of mercury, 11s. and 33s. per bottle.—PERRY'S PURIFYING SPECIFIC PILLS, 2s. 9d., 4s. 6d., and 11s. per box—a certain remedy in gonorrhœa, gleet, strictures, and chronic inflammation of the bladder—22s. a bottle.—Consultation fee, if by letter, £1. £5 packets, with advice, to be had at the establishment only, by which the fee, £1, is saved.—Attendance daily at 23, Tichborne-street, from 11 to 2, and 5 to 9; on Sundays, from 11 to 1.

Sold by Sutton and Co., 10, Bow Churchyard; W. Edwards, 67, St. Paul's Churchyard; Barclay and Sons, Farringdon-street; Butler, 4, Cheapside; R. Johnston, 63, Cornhill; Sanger, 150, New Cross; W. B. Jones, chemist, Kingston; J. W. Tanner, Egham; S. Smith, Windsor; J. B. Shillock, Bromley; T. Riches, London-street, Greenwich; T. Parkes, Chelmsford; Ede and Co., Dorking; and John Thurlby, High street, Romford—of whom may be had the *Silent Friend.*

CHESTER AND HOLYHEAD RAILWAY.—The whole of the works upon this line, now completed as far as Bangor, are to be inspected by Mr. Robert Stephenson, the company's engineer, who is now directing the various operations for raising the tubular bridge over the Conway, to its appointed place, which is expected to be completed before the close of next month. The works on the remainder of the line, between Bangor and Holyhead, 16 miles, are progressing.

TRACTIVE POWER FOR LOCOMOTIVES.—Upon well formed railways, with carriages of good construction, the average tractive force required for low speeds is about 7½ lbs. per ton, or 1-300th of the load, though in some experimental cases, where particular care was taken to obtain a favourable result, the tractive force has been reduced as low as 1-500th of the load. At low speeds the whole of the tractive force is expended in overcoming the friction, which is made up partly of the friction of attrition in the axles, and partly of the rolling friction, or the obstruction to the rolling of the wheels upon the rail. The rolling friction is very small when the surfaces are smooth, and in the case of railway carriages does not exceed 1-1000th of the load; whereas the draft on common roads of good construction, which is chiefly made up of the rolling friction, is as much as 1-36th of the load.—*Bourne.*

IMPORTANT INVENTION.—M. Coquelin, of Boulogne-sur-Mer, has discovered the means of neutralising the shock caused by the collision of trains on railways; he has also added to his invention a means of simultaneously preventing carriages from going off the rails. The Chamber of Commerce of Boulogne has, in consequence, made a report to the French Ministry in order to obtain from the Government an *ordonnance*, making it compulsory on all railway companies to employ this means of safety.

A RAIL OF NEW INVENTION.—The whole of the line of railway between here and York, is being relaid with new rails, chairs, and sleepers. The rail is of new invention, and of a very superior make, and is considered as a great improvement upon the old description, as the surface of the rail being convex, it presents much less surface to the wheel, and thereby the friction is much reduced—a great desideratum.—*Darlington Times.*

ANOTHER NEW TRAIN-BREAK.—The plan and description of another sort of break, a self-acting one, have been submitted to our inspection by the inventor—Mr. Vincent Yardley. The reaction on the buffers, when the driver checks the engine, brings this break into action. When the momentum of the carriages, as each comes close up to the one preceding, presses on the buffers, these, in their turn, press on a rod which turns an eccentric lever, and thus, by the flattening and elongation of a spring (kept back apparently by the counter-spring of the buffer when not in action), an elm block, with an iron worm surrounding the axle, is pushed towards a screw on the end of the same axle; and as the screw enters the worm in order to lock the axle, the block, by means of a pair of iron rods, also brings a pair of strong carriage springs into action on a pair of friction blocks, which grip the axle and retard its movement till the climax of the lock is reached—by the sliding of the block along a rod as the screw enters—when the worm, having arrived at its limit on the screw, arrests the motion of the axle and the wheel, unless, indeed, the break itself be broken. A reversal of a few yards, Mr. Yardley adds, will be sufficient to unlock this break.—*Builder.*

A party of gentlemen, amongst whom was Mr. M'Gregor, the chairman of the South-Eastern Railway, started from Paris on Saturday, and reached London in 12 hours and 50 minutes. The journey from Paris to Boulogne occupied 8 h. 50 m.; from Boulogne to Folkestone, 1 h. 55 m.; and from Folkestone to London, 2 h. 5 m. There was no effort in accomplishing this, the train from Paris to Amiens was a slow train, and stopped at every station.

A Spanish schemer, named Montemayor, an inhabitant of Medina Sidonia, in Andalusia, affirms that he has succeeded in constructing a balloon which he can guide at pleasure, though the wind may be unfavourable. In his simple machine, which he calls an Æolus, he engages to proceed from Madrid to Cadiz in 10 hours; and he further asserts that, at an expense of somewhat less than $15,000, he can take up with him two pieces of cannon, and discharge them on the enemies of Spain.

A DIVINER IN PARIS.—Among the smaller *lions*, who are caressed only in the absence of the *premiers sujets*, will be found an individual possessing great interest, the Curé Parramelle, the humble village priest, who has been sent for by the *Academie des Sciences*, in order to enlighten that respectable *corps* of *savans* concerning that extraordinary gift which he possesses of discovering hidden springs beneath the earth. It is curious to behold the touching simplicity of his manners, and the utter unconsciousness of the importance of the gift with which it has pleased Heaven to bless him. It appears that this man's powers are most extraordinary, that *he has never once been deceived*, but told on the instant, without hesitation, the exact spot where water may be found. He is singular amongst those who have hitherto professed the science in his utter independence of the divining rod, which he has never needed. He describes the sensation he experienced when walking over a spring, to be that keen and pricking pain in the throat and nostrils, like that occasioned by the inhaling of phosphorus, or too strong a pinch of snuff.—Paris correspondent of the *Atlas*

ORIGIN OF THE STOCK EXCHANGE.—"Yesterday," says an old newspaper, dated July 15, 1773, "the brokers and others at New Jonathan's came to a resolution that, instead of its being called 'New Jonathan's,' it should be called 'The Stock Exchange,' which is to be wrote over the door. The brokers then collected 6d. each, and christened the house with punch."

ORIGIN OF THE WORD "NAVVIE."—An exceedingly clumsy word has crept into the English language—to wit, "navvie"—as descriptive of a railway labourer. The common idea is, that the term is a contraction of the word "navigator." But why spell it with two v's? and why apply the designation of the conductor of a ship to a workman employed in the construction of roads? Or, why, moreover, should a landsman, who has nothing to do with ships, be called a navigator, or "navvie?" Both the idea and the orthography, we submit, are erroneous, for we find that the word "gnavus," signifies strong and robust, and is applicable, accordingly, to strong men fit for railway work; and also, that the compound, "ignavus," signifies the very opposite—weak and indolent. This, then, is the proper derivation of the word, showing clearly that we ought to speak of railway labourers as "gnavi," or *knaves*, for if we accent the letter *g* hard, we have literally the word "knavus," or "knave."

SIR JAMES MURRAY'S FLUID MAGNESIA.—Prepared

under the immediate care of the Inventor, and established for upwards of 30 years.—This elegant preparation is recommended in all cases of bile, acidities, indigestion, gout, and gravel, as the most safe, easy, and effectual form in which magnesia may—and, indeed, the only one in which it ought—to be exhibited, possessing all the properties of the magnesia now in general use, without being liable, like it, to form dangerous concretions in the bowels, it effectually cures HEARTBURN without injuring the coats of the stomach, as soda, potass, and their carbonates are known to do; it prevents the food of infants turning sour; in all cases it acts as a pleasing aperient, and is peculiarly adapted to females. It has long been known that the most serious consequences have frequently resulted from the use of solid magnesia, which has been proved by Mr. Brande and many other eminent chemists, to form concretions in the bowels, endangering, and, in some instances, destroying life.—Sir HUMPHREY DAVY testified that this solution forms soluble combinations with uric acid salts in cases of gout and gravel—thereby counteracting their injurious tendency, when other alkalies, and even magnesia itself, had failed.

From Sir PHILIP CRAMPTON, Bart., Surgeon-General to the Army in Ireland:—"DEAR SIR,—There can be no doubt that magnesia may be administered more safely in the form of a concentrated solution than in substance; for this, and many other reasons, I am of opinion that the fluid magnesia is a *very valuable* addition to our Materia Medica.—PHILIP CRAMPTON."—Sir J. Clarke, Sir A. Cooper, Dr. Bright, and Messrs. Guthrie, and Herbert Mayo, of London, strongly recommend Murray's Fluid Magnesia, as being infinitely more safe and convenient than the solid, and free from the danger attending the constant use of *soda or potass.* 47

Letter from J. Murray, Esq., Lecturer on Chemistry, F.S.A., P.L.S.:—

"DEAR SIR JAMES,—Many years have elapsed since you first showed me, in your laboratories, your super-carbonate, or soluble magnesia, and demonstrated experimentally the remarkable quantity of pure magnesia held in transparent solution. It was then new to me, as it was to the chemical world, and I speak advisedly, as a practical chemist. I believe its medical value cannot be too highly estimated; and I am satisfied that the public is under an infinite debt of gratitude to you for those invaluable researches, which have been the means of its introduction. Not to mention its more obvious healing virtues, I believe it to be almost, if not altogether, a specific for lithic acid concretions, when used in the pure condensed solution invented by you.

'Believe me to be your's, faithfully, JOHN MURRAY, F.S.A.

"To Sir James Murray, Dublin. Portland-place, Hull, Aug. 20, 1839."

The following testimonial of the celebrated "Distin Family," who are well known to her Majesty and the nobility of England, proves the great value of Sir James Murray's fluid magnesia, and is very encouraging for delicate persons going to sea:—

"SIR,—Having arrived from Glasgow, per the steam-ship *Jupiter*, in this stormy season, without the slightest sea sickness, we feel bound to attribute this exemption to the most agreeable *effervescent draughts* of your solution of magnesia and acidulated syrup, which were kindly furnished to us by that attentive officer, Capt. Ellis. Upon all former occasions we were martyrs to sea sickness, and we think it a great blessing that travellers may now enjoy such health and comfort at sea, as we derived from the use of this *delightful drink.*

"THE DISTIN FAMILY.

"To Sir J. Murray. Tuthill's Hotel, Dawson-street, Dublin, Feb. 19, 1839."

From Dr. KENNEDY, Master of the Lying-in Hospital, Dublin:—

"DEAR SIR,—I consider the fluid magnesia to be a *very valuable* and *convenient* remedy in cases of irritation or acidity of the stomach, but more particularly during pregnancy, febrile complaints, infantile diseases, or sea sickness."

In addition to the above, Professor Duncan, of Edinburgh, in his extensive practice, established its efficacy for removing acidities—allaying irritation of the stomach or urinary organs, and for dissolving lithic concretions and uric salts; and, consequently, as the best remedy for gravel and gout.

CAUTION.—In order to avoid the danger of concretions and sediments, which result from the use of over-saturated and unchemical compounds, made by non-medical persons, the public will please to observe, that Sir James Murray's pure fluid magnesia is prepared of that proportion of strength which is conformable to the laws of chemical equivalents, and which has been proved, in hospital and private practice, during the last 30 years, to be the best adapted for the human stomach, and the most suitable for the treatment of females and children.

Sold by the sole consignee, Mr. WILLIAM BAILEY, of North-street, Wolverhampton, and all wholesale and retail druggists and medicine agents throughout the British empire, in bottles, 1s., 2s. 6d., 3s. 6d., 5s. 6d., 11s., and 21s. each. The acidulated syrup, in bottles, 2s. each.—N.B. Be sure to ask for "Sir James Murray's Preparation," and to see that his name is stamped on each label, in *green ink*, as follows:—"James Murray, Physician to the Lord Lieutenant."

ON IRON—ITS ACTIVE AND INACTIVE STATES.

BY THOMAS SPENCER, ESQ.

Read at a meeting of the Liverpool Polytechnic Society, Monday, Nov. 9.

[Communicated by the Author.]

PART I.—ATMOSPHERIC CORROSION.

The following memoir has been drawn up for the purpose of laying before the members of the Polytechnic Society an account of a little popularly known, although exceedingly curious, series of phenomena in relation to iron and some other bodies, to which I shall append the result of a few investigations on the same subject, made some years since, but have remained hitherto unpublished. As the main object, however, is to show that iron may be reduced to a state of passive inaction, when in contact with one of its most active oxidising agents, it may not be altogether out of place to consider, in the first instance, the circumstances under which this metal combines with oxygen while in its usual state, and subject to the ordinary influences which are said to induce or further the combination. It may also be added, that although the destructive effects of corrosion are but too frequently manifested, yet the precise nature of the circumstances in which it originates are seldom considered, perhaps, beyond the laboratory of the chemist. Iron, beyond all the useful metals, has the greatest affinity for oxygen; or, in other words, its surface becomes sooner covered with rust by ordinary exposure than that of any other metal we are acquainted with, of course setting aside the bases of the alkaline earths. In the climate of Great Britain this very undesirable property of iron is universally prevalent, under circumstances of even partial exposure, and this in consequence of moisture being nearly always present in the atmosphere; but in those countries where the humidity is less, or what amounts practically to nearly the same thing, where atmospheric changes are not so frequent, this evil is by no means so general, or so destructive, in its effects. An iron cross was placed on the summit of one of the Alps, about 14,000 feet above the level of the sea; and, after 12 months' exposure, although it had become somewhat dim, yet corrosion in the usual sense had nowhere appeared. In Upper Egypt, and countries possessing climates of a similar character, instruments of polished steel may be exposed in the open air, day and night, without suffering any diminution of their brilliancy; nor need I scarcely remind my present auditory, that in those climates the atmosphere possesses equally as large an amount of oxygen as it is known to possess in our own. Indeed, in all respects, atmosphere may be said to be similarly constructed, having a like proportion of nitrogen and carbonic acid, although generally, perhaps, in tropical climates, a larger, but certainly a less fluctuating amount of what meteorologists term *aqueous vapour*, but which is more properly steam, but as perfectly transparent as the other gases which constitute the atmosphere, and, in reality, is one of its necessary and most powerful agents in the production of atmospheric change. On a cursory glance, however, it would not have been supposed that this latter constituent of atmosphere exists more abundantly in what are usually termed "dry climates," than it does in those practically less so, an example of which is afforded in our own.

Let us stop to examine how this occurs. Whenever steam, whether generated in the boiler of the engine, or by the daily process of atmospheric evaporation, is deprived of its caloric of elasticity, its water is condensed, or, in the language of chemistry, set free. In our climate, and more especially in large towns, a variety of causes are constantly operating to produce partial condensation, moisture being the result; and this will be the more apparent when it is borne in mind that atmospheric, as well as artificially-produced, steam must always be considered of, as of a gas, but while so perfectly transparent, and which is constituted of water and a definite amount of caloric; yet, above all the compound gases we are acquainted with, it is, perhaps, the most readily decomposed. As found in the atmosphere, a brief change of wind, or slight current of colder air, causes it to part with its caloric, when its water is consequently set free, but, under those circumstances, in globules so minute, as scarcely to be perceived, or, at all events, as to materially interfere with the apparent transparency of the atmosphere. That condensation, however, is nearly always taken place, even in dry weather, is abundantly evident as the resulting vapour produces that blue haziness, so characteristic of our climate, and which so often interferes to prevent our seeing even not very distant objects; but although largely conducing to the fertility of the soil, it is equally active in the corrosion of our most useful metal.

That condensation does not take place to the same extent, in countries where the climate is less subject to change, is equally evidenced, apart from hygrometric observation, that comparatively distant objects can be seen so distinctly, as to excite the wonder of those who observe it for the first time. In a word, air, at common temperatures, coming into contact with bodies colder than itself, is compelled to part with its aqueous vapour; and although this is not so frequent, or so visible, during the day, yet at night the effects of it are nearly always observed. It has been already observed, that dry atmosphere is not alone sufficient to cause the corrosion of iron—let this, however, be clearly understood. By dry atmosphere is meant that which is perfectly transparent, but which, at the same time, may contain, even to saturation, the largest possible amount of water that is to be obtained by evaporation; but which is held latent in virtue of the caloric absorbed during the process. Practically, atmosphere in such a state is the driest; and it is usual to describe such a state by saying, "the dew point is high." When nothing operates to cause a reduction of temperature, then the air has no tendency to corrode iron. The atmosphere also contains, say, 20 per cent. of oxygen. We may, however, immerse the most brilliantly-polished iron, or steel, in a vessel of this gas, without any diminution of brightness, or other change taking place on the surface. We thus see, then, that whether at common, or even very high, *atmospheric* temperatures, iron has no tendency to combine with oxygen. Nor, in like manner, has this metal the power of decomposing water, in order to combine with its oxygen, in the absence of a third agent, although that it did so was very generally believed, and, perhaps, to a certain extent, is still so. The fact, however, is susceptible of ample proof, by the following experiment:—If a bottle be taken, filled with *perfectly* pure, distilled water, which shall have been previously deprived, by boiling, of the air it usually holds in solution, and if a slip of polished iron or steel be altogether immersed in it, while, at the same time, care is taken that the bottle shall be perfectly stopped, and also that there shall not be left any vacant space, however slight, between the surface of the water and the stopper, under such circumstances the surface of the iron will not be observed to have suffered any oxidation; and should the conditions of the experiment be perfectly fulfilled, the metal may be so kept for any length of time, as well as if it were in the purest oriental naptha. Nor will steam corrode iron—a polished surface of this metal may be kept in contact with it for any length of time, provided the temperature shall not be so low, as to allow of condensation; although, even then, should the absence of atmospheric air be perfect, corrosion will not take place.

It has been already stated, that iron is a highly oxidisable metal, and, moreover, that it is nearly always in circumstances that freely admit of this natural property being most actively exerted; yet it is directly proved by experiment, that it has no power of combining with this gas when placed altogether in contact with it, nor even when mingled with other gases in a dry atmosphere. Nor has it any power of obtaining oxygen by the decomposition of water. Neither has it any direct power of obtaining it from the transparent aqueous vapour, or, rather, steam of the atmosphere; yet the bodies here enumerated are really in practice, the only ones to which this metal is exposed.

The question now naturally arises, under what circumstances, then, does this very general, and, as respects our own climate, all-prevailing action take place? An intelligible answer is furnished by observing the results of a very simple experiment. If one end of a slip of polished iron be immersed, in a vessel of commonly pure water, and the other left exposed in the atmosphere, it will soon be discovered that the part first corroded is that which occurs at the surface of the water, and which, also, touches the air; and this will occur, under ordinary circumstances, long before either end of the slip is acted on.

Now, this experiment points directly at the conditions that are ordinarily necessary to cause this metal to corrode—viz., the simultaneous presence of air and water, or what, in ordinary language, is termed dampness or moisture, neither air nor water alone being capable of producing this effect. But, it may be asked, from which of these sources does it obtain its oxygen, seeing that the presence of both is necessary? The result of another equally simple experiment affords a proof, that in this, as in most other examples of oxidation, the gas is directly abstracted from the atmosphere. If filings of ordinarily pure iron be immersed in a eudiometer filled with clean water, as taken from a stream, and allowed to remain for 24 hours, on examination they will be observed to have acquired a slight coating of rust, but that the oxygen thus entering into combination with the iron is obtained from the air held in solution by the water, and not from the water itself, may be rendered still more evident by observing the result of a continuation of the experiment. Let another portion of filings be added to the water in which the first were oxidised, and, after allowing them to remain a similar period, it will now be found that they have not become oxidised as at first, and the obvious reason is, that the first quantity of filings had deprived the air contained in the water of all its oxygen. It may be added, that the purer the water the greater is its capacity for air, and hence its power of corrosion is materially increased.

Were water decomposed, as it is supposed to be by some, hydrogen would surely be found at the top of the eudiometer, in which the experiment is made. Such, however, is not the case. This objection has been met by an active experimentor—Dr. Mallet—by supposing that the hydrogen, as soon as formed, enters into combination with the nitrogen that must necessarily be present, to form ammonia. Apart from the reasons that would cause us to altogether discard this idea, I have hitherto been unable to detect the presence of this substance, when the experiments were conducted with common care, and with due regard to the purity of the materials employed. If formed under such circumstances, the oxygen would still remain in the water, hydrogen, under ordinary circumstances having a greater tendency to combine with nitrogen, to form ammonia, than with oxygen to form water. In such a case, the nitrogen

would be the gas absorbed, or rather entering into combination, and by admitting a fresh supply of air, any quantity of ammonia might thus be formed.

Having seen that a mixture of air and water, or dampness, is alone capable of causing the corrosion of iron, apart from the consideration of adventitious gaseous vapours altogether; it is, therefore, not difficult to see how iron and steel, in the widest range of their usefulness, are precisely in the most favourable circumstances to become oxidised, as we find all the conditions necessary to produce this result in the constant changes of temperature that are of daily occurrence. So prevalent, however, is this metal in the state of an oxide, as to to give countenance to the belief that it is its natural one—that in the present circumstances of our globe it is its natural one; look where we will, it is found; its colour is always more or less imparted to the soil, sand, clay, freestone, building brick, occasionally water, and even the blood itself—all derive their red colour from this world-diffused oxide; and when we further consider that it is to art alone we are indebted for iron in the metallic state at all, in being never found in the mines out of combination, but most frequently with oxygen, sulphur, or carbon, and when a specimen of what is termed native iron does occur, like an aërolite, it is preserved as a rarity in the cabinets of the curious, by way, it may be said, of proving the vastness of the microscopic nature of the exception. These, and other considerations, add strength to the opinion, that the condition of its existence in the metallic state, is solely due to the immense amount of heat absorbed during the process of smelting, and which is held latent while existing as a metal, but which must again be rendered before it can combine chemically with another substance. We already know, that for every atom of oxygen which combines with one of iron, a definite amount of heat is liberated, so large, indeed, that when a piece of iron is observed covered with rust, it is known that as much heat has been diffused throughout the process of oxidation, as would have been sufficient to have rendered the mass red hot, had it taken place with greater rapidity.

*** In our last Journal, we inserted a notice of the first part of Mr. Spencer's paper, as extracted from the *Liverpool Mercury*; but having since been favoured with a revised report, we have pleasure in now placing the lecture, in a correct and more detailed form, before our readers. [*To be continued.*]

Transactions of Scientific Bodies.

MEETINGS DURING THE ENSUING WEEK.

THIS DAY.....	Royal Botanic—Inner Circle, Regent's-park	3½ P.M.
	Westminster Medical—17, Saville-row	8 P.M.
MONDAY.....	British Architects—16, Grosvenor-street	8 P.M.
	Botanical—20, Bedford-street, Covent-garden	8 P.M.
	Medical—Bolt-court, Fleet-street	8 P.M.
WEDNESDAY.....	Society of Arts—Adelphi	8 P.M.
	Geological—Somerset-house	8½ P.M.
THURSDAY	Zoological—11, Hanover-square	3 P.M.
	Antiquaries—Somerset-house	8 P.M.
FRIDAY.....	Botanical—20, Bedford-street, Covent-garden	8 P.M.
SATURDAY	Asiatic—14, Grafton-street	2 P.M.

On Mining, & the Practical Applications of Geological Science.

PROF. ANSTED'S LECTURES, AT KING'S COLLEGE.

LECTURE VIII.—GEOLOGICAL SCIENCE PRACTICALLY APPLIED TO MINING.

Professor ANSTED commenced this lecture by saying, that he should in it enter upon a rather different department of practical geology than he had considered hitherto—viz.: the subject of "materials" merely in regard to the way in which they were obtained, or *mining*. The term "mining," he understood to mean the obtaining of any material which formed part of the earth's crust, or is present in it, by any artificial means whatever; and, in this sense, mining included a certain amount of quarrying. Generally, in England, the term was applied more particularly to underground operations, but it was not necessarily so limited; and it was very requisite to bear in mind when in other countries, that in obtaining materials it was not always necessary to go beneath the surface. It was sometimes enough merely to cut away the surface; and he had seen mines, where the material sought came out at the top of a mountain, and formed an enormous mass of matter, which left the miners nothing to do but to remove it. All sorts of quarrying were also in this extended meaning of the words mining operations. Generally speaking, they would have to consider all those circumstances under which valuable minerals might be expected to be found. He said "valuable" minerals, because, in one sense, all the materials of which the earth's crust was made up, were *minerals*. A large number of such materials, however, rarely or never required to be obtained by mining, as they were so abundant where they did occur, that it was not worth while to be at great expense and trouble to seek them in localities where they were less common. It was, however, possible that there might be a bed of mere stone, as, for instance, of the kinds used for ornamental purposes, which might be valuable enough to make the digging to a considerable depth to obtain it, a profitable speculation. In this way, quarries for stone might become mining operations; and, in many other ways, works of this nature might be involved. In short, he repeated, that mining was necessary where masses of matter, present in a natural state in the earth's crust, had to be removed.

Having, then, in mining to take away certain valuable materials, no matter how or in what degree valuable, from the earth's crust, it would be necessary first to know *how* they existed. No one would fail to perceive that materials existed in two very distinct ways—first of all, simply in the form of masses of matter deposited by water in beds, sometimes thick and at other times thin; and which, giving undoubted evidence of their origin, required only to be found to be worked. Of this nature were beds of stone, the vast quantities of mineral fuel which, under the name of coal, were so well known, and also the principal portion of the iron ore present in such great quantities in this country. The masses of salt, also of this kind, were peculiarly situated, being associated with gypsum and marl in beds of red sandstone. All these were obtained by simple mining operations. All these, too, were part of the earth's crust, or of the materials of which that crust was made up, and were, in the simplest sense of the word, "beds." They were arranged in the layers characteristic of the rocky formations. A bed of this kind, overlaid by several others, was obtained by digging down to it, or by following it to where it cropped out at the surface, and the material worked by quarries or galleries. These were the simplest kinds of mining operations, but they often involved works of the greatest magnitude. By far the best illustrations of this kind of mining were the different processes, adopted in various parts of the world, to obtain beds of coal; and in speaking of coal, he should in fact be speaking of beds of all kinds; for coal was found in seams of all possible dimensions, and in all possible associations, often being very thin indeed, and, in this country, of all intermediate thicknesses, from a few inches up to about 40 ft. The larger of these seams, or beds, of coal required to be worked in a very different manner to the smaller, which, in fact, were often mere films; and, therefore, the coal mines would afford ample illustrations of mining in every degree of magnitude. In mentioning 40 feet, he did not intend to say that that was the *maximum* thickness of the coal beds; for there were some probably upwards of 150 feet in thickness, and indeed, in some countries, there seemed no known limit to the thickness of the seams of coal.

Interstratified beds, however, formed but one of the ways in which valuable materials were found in the earth's crust; the second way in which they existed was in crevices in the various stratified beds, or in cracks of the rocky formations, which were not bedded—the grand fundamental distinction being, that the material was presented in the first case horizontally, and in the second vertically. In the one case, they took away one of the films of which the earth's crust was made up; and in the other, they removed that which was introduced into rocks and beds after their original formation; and it so happened, that some of the most valuable minerals were obtained in the latter way. These two distinct conditions of the materials to be obtained involved very different proceedings in mining, chiefly for the mechanical reason, that the one was found in horizontal masses, and the other in masses which were vertical, or approaching to it. [The lecturer illustrated this point by reference to a number of excellent diagrams, which were exhibited.] It was also possible to have in the same district two materials of the most valuable kind—the one reposing horizontally, and forming true beds, seams, or stratified masses; and the other filling up accidental crevices in those beds, and known most commonly by the appellation of "lodes," though they were often called "veins." In talking of coal, it was better to use the word "seam," applying the term "lode," or "vein," to the vertical cracks; the way in which the material existed, and the mining principle involved, being entirely different. In the one case, there was nothing to do but to take away the horizontal film, leaving the superincumbent beds unsupported; while in the other, the contents of the vertical cracks and fissures had to be removed. This was not at all difficult to understand generally, but it involved subjects of great difficulty, arising out of the circumstances under which these two kinds of mineral produce might be placed, and the state in which they might be found. It was not very difficult to separate the various materials into groups, and though it would not be expedient now to dwell on the laws of their distribution, yet that was a point of great importance in mining operations, and one to which the attention of students, as practical miners, ought first to be directed.

The method he had marked out, as the most convenient one to adopt, involved, first of all, a description of such mining operations as related to material, merely as it formed part of the crust of the earth; taking coal as the example, partly because it was characteristic of the rest, and also because, being the most important of our mineral productions, the principal methods used in obtaining it were generally the best that could be adopted. The next thing would be to consider in what way these materials were accumulated, and under what circumstances they were likely to be found; for until something was known of the order in which they were put into their position, the way in which they might have been modified since, and their general relation to the surface, as indicative of the circumstances under which they might appear, would be labouring under great disadvantages—the great object being to find them, and then to work them in the best and most convenient manner.

With regard to the law of deposit, notwithstanding it affected all minerals generally, it was dependent on local circumstances. If the material sought formed part of the earth's crust, it would be found that the beds were deposited under certain circumstances, which had relation to the materials above and below. Coal, for instance, was deposited on beds of a certain kind, and other beds of a particular description were deposited on it. All the coal measures in England occurred in beds of a particular geological date, all the workable coal of England being of the Palæozoic period. The coal measures ranked neither among the highest nor the lowest of this group of rocks; but predominated in the upper part of the Palæozoic deposits. There was no coal in the Silurian rocks, little or none in the beds of Devonian origin, and scarcely any in the beds of carboniferous limestone. There was a little more in the millstone grit, but none worth speaking of. Then came masses of clay and sand, and with them the coal. After this series they had the magnesian limestone, which terminated the Palæozoic formation. Coal then was found almost exclusively in beds of one geological age in England; but this was not necessarily so in other countries. A great deal also was found in Europe in beds of this age; but it was also found elsewhere in deposits of a more recent period. The distribution of coal depended, not only on its geological age, but on the nature of the material itself. What was coal? All true coal was derived from vegetable matter, and consisted of carbon mixed with a certain quantity of hydrogen, with a mixture of several other substances in small quantities. It was, however, for the most part, carbon, little altered, and containing enough gas to make it burn. It produced 3, 4, or 5 per cent. of ashes, which were for the most part silica. He would not go into the question of the origin of coal, on which geologists were not altogether agreed; but it was perfectly clear, from the fossils associated with coal, that it must be of vegetable origin, derived from trees and land vegetables. It must also have been formed at the mouths of rivers, or at the edge of a tract of land, as it was always associated with beds of mud, or "under clay," which contained the fossil roots of trees, and which, doubtless, were once vegetable mould. This was the general condition of coal, and what always might be looked for in our own country. Indeed, its conditions were so little variable, that persons who lived in the coal districts, and whose interest it was to study the subject, always depended upon this regularity for their estimate of working. Experimental knowledge, then, of the law of deposit was useful in determining the circumstances under which the beds might be expected to occur, but no further. They would always, however, remember the fact, that the beds of coal in England were of this particular age, and be safe of obtaining coal in the deposits of that period. There were, it was true, some exceptions known; as, for instance, the lower colitic coal found at Whitby, in Yorkshire, and in Scotland, and the very small portions of coal, derived pretty nearly in the same way, in the upper colites, and in the Kimmeridge clay and Wealden beds; but these were not worth while working, as there was so great an abundance of far more valuable coal.

It was supposed, and with good reason, until recently, that all the coal in other parts of the world was of the same date as the great coal measures of England; but it was now ascertained, that that was not the case. There was a great deal of coal in Belgium, in France, in Germany, and in other parts of the continent, all of the same age, and existing under the same geological condition, as that of England. Then, again, there were extensive coal fields in Asia, which were possibly of a yet older period; while in America, in the State of Virginia, there was a tract of coal, probably more than all that of England put together, which was a much newer formation, and, probably, about the same age as the colitic coal of Yorkshire. In India, too, there were immense masses of coal, probably of a more recent date than the Palæozoic formation; and others also in the Eastern Archipelago. Lastly, there were Palæozoic coal fields in Eastern Australia, and, no doubt, in other parts of the world, of a very different geological condition to those of England, and many of an extremely modern date. Every great physical division of the earth ought, therefore, to be considered by itself; and that not merely as to its general geological conditions, but with regard to the local condition of particular districts. This was necessary, not only with regard to coal, but to other minerals, as, for instance, salt. Salt was found in England in the beds of new red sandstone, and confined to that formation. It was associated with certain beds of lime, marl, and sandstone, which appeared to have a distinct relation to it; but if they went to Poland, there would be found in beds of sand containing gypsum, enormous masses of salt existing in a condition very different to the salt of England, and by no means of the same age. There they had the same appearances, and nearly the same associated rocks; while the geological age was totally different. This was also the case with other materials, and even such ores as those of iron and copper, and other metalliferous materials, not deposited in beds, but to be looked for in cracks and crevices in the earth. Still there were certain general laws connected with these latter materials different from coal and salt, and such minerals which formed part of the earth's crust. Some ores, for instance, were found in *aqueous* rocks only, others in *igneous* rocks only, and some were to be found in both. A knowledge of these laws, which were strongly marked, was very useful.

The talented lecturer next considered the nature of the beds of coal in our own country, and proceeded to explain the different circumstances under which these beds occurred, mentioning them in the order of their magnitude and relative importance. The first were those of Durham and Cumberland, then those of South Wales, next came those of Lancashire and the West Riding of Yorkshire (which might be considered as one), then those of Staffordshire and Warwickshire, of Leicestershire, and the Midland Counties, of Flintshire, and, lastly, the small fields near Bristol. These were all distinct coal fields in England; and, in the northern part of our island, the valley of the Clyde was the seat of other rich and valuable coal measures. Coal was dotted over Ireland in various places, and, though nowhere in large masses, was well worth working for home consumption.

In his next lecture, Professor Ansted announced that he intended to describe the system of working carried on in two or three of the great English coal fields, such as those of Newcastle, Staffordshire, and South Wales, as in them every variety of circumstance and thickness and inclination of bed was presented, referring, however, to the others, where any particular application of geological science required consideration.

He concluded by cautioning his hearers against the great mistake, which was so often made, of applying a system suited to a particular district, and which, therefore, worked well there, to another district, without ascertaining whether or no its geological conditions were the same.

[The succeeding lecture will be reported at length in our next week's Journal.]

GEOLOGICAL SOCIETY.

Nov. 17.—Sir H. T. DE LA BECHE (President) in the chair.

A. Beardsley, Esq., was elected a fellow.

"Notes on the Geology of the Coast of Australia," by J. B. Jukes, Esq., was read. In this memoir Mr. Jukes endeavoured to present a general view of the physical structure of Australia. The eastern coast is occupied by a great range of high land, appearing like a continuous chain of mountains when seen from the sea, and rising in several places to 5000 feet, or more, above the sea level. This chain has an axis of granite, with occasional large masses of greenstone, basalt, and other igneous rocks. It is flanked on both sides by thick beds of palæozoic formations, chiefly sandstone, but also containing limestone and coal. In the northern portion of the chain Dr. Leichardt found similar formations—and ocasionally trap and granite, near the Burdekin river. In the Port Phillip district there are similar igneous rocks, and on the coast tertiary formations which Mr. Jukes found resting on the edges of upturned palæozoic beds. In West Australia, the Darling range consists of granite below, covered by metamorphic rocks; and between it and the sea is a plain composed of tertiary beds. In the colony of North Australia there is a great sandstone plateau, rising about 1800 feet above the sea, and probably of palæozoic age; whilst on the immediate shore, and round the Gulf of Carpentaria, are beds supposed to belong to the tertiary period. Similar formations constitute the substratum of the Central Desert; in which Capt. Sturt was compelled to turn, when half-way to the Gulf of Carpentaria, from the southern coast. Hence Mr. Jukes conjectures that these tertiary rocks are probably continuous through the whole centre of the island—and that, during the tertiary period, all this portion of the country was submerged, whilst the high lands on the coast rose like four groups of islands from the shallow sea. In confirmation of this view, he remarked that a greater difference existed between the plants and animals of New South Wales and Western Australia, though in the same latitude, than between those at the southern and northern extremities of the eastern chain of mountains, distant 20° of latitude from each other.—A "Description of a Geological Map of Western Australia," by Messrs. J. and F. Gregory, was read.

SOCIETY OF ARTS.

The usual meeting of the society was held in their great room, John-street, Adelphi, on Wednesday last. The subject of discussion for the evening was announced to be the prolific and highly important one, of means of communication between the guard and driver of a train of railway carriages. As many as five distinct schemes were submitted to the society, having this great object in view, and the nicety of their detail sufficiently manifested the extreme attention which contrivances for this purpose have received from inventors.

Mr. Deane John Hoare's communication on this subject, which was partly heard at the last sitting, and now resumed, recommended the adoption of bars of wood or iron, running through bearings fixed to the tops of all the carriages in the train, and connected by joints, about which the several sections of the telegraph, as the inventor termed it, might revolve in planes of right angles to each other, by which means a continuous bar would be formed, susceptible of participating in the curvilinear motion of the train, as occasioned by the combined alteration of curves and gradients. The bar finally acted upon an alarm on the tender, and was to be worked at the discretion of the guard. Mr. Dutton's patent railway communicator was the next instrument of this class standing for consideration on the paper, the communication of which met with a most flattering reception on the part of the meeting. Our readers will remember that on a former occasion we gave a detailed statement of the particulars of an interesting series of experiments performed with this ingenious contrivance on the Eastern Counties Railway, between London and Romford, at which we had the pleasure of being present. Mr. Dutton's arrangement consists simply in the employment of a continuous tube, formed by lengths of copper pipe attached beneath the floors of the carriages, and united by flexible tubes at the coupling chains, so as to admit of freedom of motion. By this very simple contrivance one tube is formed, extending the entire length of the train, and along which a wave of sound can be propagated by a single omission of the breath. A whistle close to the engine-driver's place terminates the tube, by means of which, in case of any sudden emergency, he is warned to stop the train. Mr. E. Ellis Allen exhibited drawings of his mode of communication, which proceeded upon the adoption of the galvanic current. The peculiarity of the arrangement consisted in this, that the current was allowed to circulate through the wires until broken, and at that moment a steam-whistle was detached by the attraction of an electro-magnetic helix. The advantage claimed for the system was this, that the signal would be made in the event of any of the coupling chains becoming detached; but it is obviously open to the objection of using the steam-whistle, which is already devoted to other purposes. Mr. F. Brothers's system consisted in the use of a number of small condensing engines, by means of which condensed air might be blown through a whistle. His employment of condensed air for this purpose was the chief feature of the machine, the inventor stating, that by the result of experiments, the superiority of atmospheric air in this respect had been fully established.

Messrs. Brett and Little's telegraph alarum formed the subject of the last communication, which was accompanied by an elegant working model of the apparatus, and generally approved of, on account of its extreme simplicity, beauty of construction, and readiness of action. On several occasions we have described this instrument to our readers, and have pointed out the mode in which, by the adoption of very simple means, this instrument may be rendered subservient to a variety of purposes. For the purpose of the present communication it will only be necessary to state that these gentlemen form a galvanic circuit by wires joining the eye bolts of the coupling and safety chains, through which discharges of the fluid are made at the will of the guard, by completing the circuit, the result being one, two, three, or more distinct strokes on a clear bell. This exceedingly ingenious contrivance is at present largely used on the London, Brighton, and South-coast Railway, where its introduction has been attended with the most complete success, the economy of the system being self-evident, from the circumstance of all the apparatus, with the exception of the wires, being used for other purposes in connection with the telegraph. Several experiments with this instrument were performed in the presence of the society, and excited general admiration at its rapidity and precision.

The several papers having been read, and cursorily considered, a general discussion on their comparative merits ensued, in which each found its own advocates. The ingenuity and peculiar advantages of each were admitted by the principal speakers, but the instruments of Messrs. Brett and Little, and that of Mr. Dutton, appeared to share the approbation of the meeting. Indeed, there seems to be little doubt that these very excellent and simple contrivances stand at the head of their respective classes; for not only are they entitled to that distinguished position by their being first in the field, but the various circumstances we have pointed out are sufficient in themselves to give them the necessary title. Each has advantages peculiar to itself, which, in the proper place, would form a most interesting subject of investigation. We have thought it right to compare them in some degree, rather by way of conveying the feeling of scientific men on the subject, than of expressing any opinion of our own, which indeed is unnecessary, as an actual inspection of Mr. Dutton's apparatus on the Eastern Counties Railway, and of Messrs. Brett and Little's on the London, Brighton, and South Coast, will enable any one to judge of the subject for himself, in all its pratical details.

The authors of the several papers having received the thanks of the society, the meeting separated with the understanding usual on such occasions, that no opinion was to be considered as given by the society, until the mechanical committee, to whom the question would be referred, had decided upon it.

On Wednesday next, the mails and other trains between London and Liverpool, Manchester and the north, will pass over the Trent Valley Railway. The London and North-Western Company have determined, on and after that day, to regulate the clocks at all their stations by Greenwich time, which is before Birmingham clocks 7 minutes; Liverpool clocks 12 minutes; Manchester clocks 10 minutes; Preston clocks 10 minutes; and Chester clocks 12 minutes.

WATERFORD AND LIMERICK RAILWAY.—The line to Tipperary is now close on completion. The first experimental trip was made on Wednesday last, when the engines, tenders, and several carriages left the terminus at the Roxboro'-road, Dublin, for Tipperary, where the permanent station-house is nearly finished. The directors have made an eighth call for payment of 5*l.* per share, before the 10th December, and the company propose to take loans upon 6 per cent. debentures.

BY HER MAJESTY'S LETTERS PATENT.

FULLER AND DE BERGUE'S VULCANIZED INDIA-RUBBER BUFFERS and BEARING SPRINGS FOR RAILWAY CARRIAGES.

The PATENTEES of this NEW and IMPORTANT INVENTION beg to announce to Engineers, Carriage-builders, and Railway Companies (especially those constructing new lines), that they have now completed their arrangements for SUPPLYING the VULCANIZED INDIA-RUBBER BUFFERS and DRAW-SPRINGS, for Passenger-Carriages, Waggons, Cattle-Carriages, Engines, Tenders, &c., and are prepared to execute Orders TO ANY EXTENT. 48

On several of the principal Lines these Buffers have now been tried for many months past, under very able superintendence, and with decided success. The patentees, therefore, feel justified in stating, that they are prepared to furnish not only a more efficient Buffer than any hitherto in use, but on terms which will effect a considerable saving to Companies in the first outlay.

Specimens of the various kinds of buffers and draw-springs may be seen, and prices obtained, on application at their offices, No. 9, Arthur-street West, London-bridge, or at their depôt, No. 2, David-street, Manchester.

The patentees will also be happy to furnish full information to all communications by letter, together with drawings of the best mode of application.—The attention of Locomotive Engineers is particularly invited to their BEARING SPRINGS for ENGINES and TENDERS, the recent trials of which have proved most successful.

TO ENGINEERS AND BOILER-MAKERS.

LAP-WELDED IRON TUBES, FOR MARINE AND LOCOMOTIVE STEAM-BOILERS, TUBES FOR STEAM, GAS, AND OTHER PURPOSES, *ALL SORTS OF GAS FITTINGS.* 49

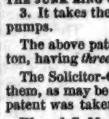
THE BIRMINGHAM PATENT IRON TUBE COMPANY,

42, CAMBRIDGE-STREET, BIRMINGHAM, & SMETHWICK, STAFFORDSHIRE, MANUFACTURE BOILER and GAS TUBES, under an exclusive License from Mr. R. Prosser, the patentee. These tubes are very extensively used in the boilers of marine and locomotive steam-engines in England and on the Continent—are stronger, lighter, cheaper, and more durable than brass or copper tubes, and warranted not to open in the weld.

42, CAMBRIDGE-STREET, CRESCENT, BIRMINGHAM.

WORKS—SMETHWICK, STAFFORDSHIRE.

LONDON WAREHOUSE—No. 68, UPPER THAMES-STREET.



TO ENGINEERS, RAILWAY AND STEAM-BOAT COMPANIES, AND THE OWNERS OF STEAM-ENGINES IN GENERAL.

W. & C. MATHER beg to call the attention of the above parties to their 50

PATENT ELASTIC METALLIC PISTON.

From the great satisfaction it has already given, they can, with confidence, recommend it. The following are some of its excellent properties:—

1. The great, equable, and mild elasticity: its being perfectly cylindrical and self-adjusting—thereby enabling it to yield, with the least possible friction, to any inaccuracies of the cylinder, whether oval or taper.

2. Its extreme simplicity and lightness—the packing consisting of ONLY TWO PIECES OF METAL, having vertical and horizontal elasticity in due and proper proportion, independent of each other—the horizontal elasticity being also independent of SCREWING DOWN THE JUNK RING OR COVER.

3. It takes the least possible space; and is, therefore, well adapted for air and water pumps.

The above patent was unsuccessfully opposed by Mr. Goodfellow, the patentee of a piston, having *three angular rings*, of a bevil form.

The Solicitor-General conceived that there was not the slightest similarity between them, as may be seen from the subjoined letter from Mr. Carpmael, through whom the patent was taken.

W. and C. M. can refer to upwards of 100, made since the date of the patent (April, 1846), each of which is giving entire satisfaction. They beg to call attention to the fact, that, in a number of cases, they have replaced those made of *three annular rings of the bevil form*, a description of which appeared in the *Mining Journal* of Saturday, October 2, 1847.

[LETTER REFERRED TO.] *April* 2, 1846.

DEAR SIRS,—Mr. Solicitor-General took the hearing in your patent yesterday, at the Privy Council, and decided that the invention did not *interfere*; we are, therefore proceeding with the patent. We are, your obedient servants,

Messrs. Mather. POOLE & CARPMAEL.

The object of publishing the above letter, is to convince parties wishing to use W. and C. Mather's piston, that they have nothing to fear from the caution which accompanied the advertisement referred to, or the unfounded reports which are industriously circulated from the same quarter.

Locomotive and other pistons guaranteed for *twelve months*.

Salford Iron Works, Manchester, Sept., 1847.

TO ENGINEERS, RAILWAY, AND STEAM-BOAT COMPANIES, AND THE PROPRIETORS OF STEAM-ENGINES GENERALLY.

BENJAMIN GOODFELLOW,

THE PATENTEE OF THE COMPOUND ACTING AND SELF-ADJUSTING METALLIC PISTONS, 51

Desires to solicit the attention of the above parties to the said improvement; the peculiar advantages of which are, that they are particularly sensitive to any variation in the size of the cylinder, and will accommodate themselves to an oval, with a constant tendency to wear it cylindrical. The junk-ring, or cover, is brought down upon the bed of the piston securely and truly, leaving the packing perfectly at liberty between the plates—against which the spring presses the outside rings or casing, as well as to the surface of the cylinder, thereby preventing the escape of steam either past or into the piston—at the same time the friction being the least possible.

As there are many, no doubt, still unacquainted with the existence of his pistons, and the same being liable to be imposed upon by parties making and vending in imitation (but with slight variation in form), he takes this opportunity of cautioning them—it being susceptible of many modifications, the simplest and most efficient of which may be seen is the subject of his patent.

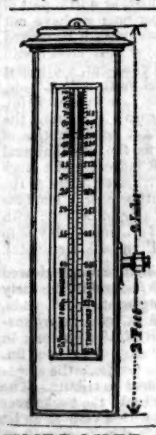
The patentee has twice established his exclusive right to the principle of construction of his improved metallic pistons—once in an action "Godfellow *v.* Barker," tried on the 11th February, 1846, in the Court of Exchequer, before the Chief Baron and a special jury, when a verdict was found for the plaintiff. In this case the defendant's infringement was a helical or spiral formed spring—thus: around which was placed a metallic casing, to which it gave a compound, or vertical, and lateral pressure, an arrangement which was proved, in both trials, never to have existed before the plaintiff's patent.

A similar result attended a former action, "Goodfellow *v.* Swindlehurst," tried at the assizes at Liverpool, in March, 1845; the infringement of which was a series of wedge-form segments, acted upon by a flat-spring, thereby producing the compound action.

And, as a proof of the clearness of his established right to the said improvements, the juries in both cases, after long and well contested trials, were not three minutes in finding verdicts for the plaintiff.

B. G. begs to say, that he is prepared to manufacture any size of metallic pistons, or buckets, on the shortest notice; and has, at present, all sizes at work, up to 88 inches diameter, and air-pump buckets up to 48—specimens of which may be seen, and any particulars had, at his works, Hyde, near Manchester. He can rebore the cylinders for the same (when required), without removing them from their places, and will guarantee that all shall be of the best material and workmanship, and engages to give every satisfaction to parties who may favour him with their orders.

There are now upwards of *one thousand four hundred* of them at work, and principally at very large and respectable firms—a list of which may be had on application, as above.



HENRY BAKER begs to call the attention of Engineers and Proprietors of Steam-Engines, to his NEWLY-IMPROVED STEAM-GAUGE, 52

which shows the PRESSURE and TEMPERATURE of the STEAM, as seen in the drawing annexed. It is an ornament to the engine-room, and supersedes the ordinary mercurial gauge in these respects, by not being so cumbersome—much cheaper, and warranted accurate.

Boiler explosions, in many instances, occur through steam-gauges not being in good working order; therefore, every attention should be paid to these very necessary adjuncts.

HENRY BAKER'S STEAM-GAUGES may be FIXED in a COUNTING-HOUSE, and will SHOW the PRESSURE the same as if fixed in an engine-room—thereby having a check on the person working the engine.

Price.....£2 2s.

VACUUM-GAUGES, in brass frames, showing the barometric scale, from 22 inches to 30 inches.—Price, £3 3s.

Ditto ditto, in mahogany, very elegant, showing the barometric scale in full.—Price, £3 3s.

HENRY BAKER,

BAROMETER, THERMOMETER, & STEAM INSTRUMENT MANUFACTURER,

90, *HATTON-GARDEN, LONDON.*

IMPROVED LIFTING JACKS, 53

MANUFACTURED BY

W. AND J. GALLOWAY,

PATENT RIVET WORKS,

MANCHESTER.

IMPROVED RATCHET JACK.

HALEY'S PATENT LIFTING JACK.

*** The attention of parties who employ

Lifting Jacks,

is respectfully requested to the superiority of those annexed, over those hitherto in use.

Mining Correspondence.

ENGLISH MINES.

BARRISTOWN.—In the 10 fm. level end west we have at present a good lode, about 18 to 20 in. wide, standing perpendicularly in the end, and worth about 10*l.* per fm. We have completed the sinking of Slob shaft to the 18 fm. level, and are now making preparations for drawing from that level through it; by this we hope to increase our quantity of lead monthly raised; the lode in the stopes, in bottom of 18 fm. level, behind west end, is worth about 8*l.* per fm., nothing improved; the stopes in the back, just commenced on tribute between this and west end, look well for ore; Doyle's stopes, under the 18 fm. level, west of flat-rod shaft, are at present poor; the stopes in the back of the 18 fm. level, over this, are looking well, worth over 20*l.* per fm., but the ore does not lengthen eastward. We have no lode in the 12 fm. level end at present, and the ground very hard, although in sinking Slob shaft, about 10 fms. to the west of it, we had a good lode; the back of the 12 fm. level is improved, worth about 10*l.* per fm. The stopes on Middle lode are worth about 6*l.* per fm. The lode in adit end east is large, but producing a small quantity of lead, scarcely enough to pay for dressing. We have commenced a cross-cut south at the bottom of Kiln shaft (18 fm. level) to cut the lode standing south of Kiln shaft; the late rain has prevented our doing anything further till the level is in at Nangle's.—Nov. 17.

BEDFORD UNITED.—At Wheal Marquis, we have cut the slide on the cross-course, in the 90 fm. level east; the stopes in the back of this level are worth 80*l.* per fm.; in this level west, on the south lode, the lode is worth 18*l.* per fm.; and on the north lode the lode is worth 10*l.* per fm. In the 80 fm. level east the lode is 2½ ft. wide, composed of fluor-spar and ore, saving work; and in Hooper's winze, in this level, the lode is 15 in. wide, composed of mundic and ore. The lode in the 70 fm. level east is 20 in. wide, saving work; and in Harvey's winze, in this level, the lode is 2 ft. wide, spar, mundic, and ore. In the 25 fm. level, east of the south engine-shaft, the lode is 2 ft. wide, producing good stones of ore, and altogether more promising. There is no alteration in the adit level. Our next sampling of about 120 tons will be very good quality ore.—Nov. 23.

COATLITHE HILLS.—During this week, the men have been again employed in driving west from A shaft towards the rise; and I expect they will cut a communication some time in the next week. The vein in the end is much the same as when I last wrote.—Nov. 20.

COOK'S KITCHEN.—In the 190 fm. level, west of Chapple's shaft, the part of the lode on which we are driving is 4 ft. wide, kindly, and producing a small quantity of tin. In the 180 fm. level west, the part of the lode on which we are driving is 4 ft. wide, and worth about 20*l.* per fm.; in the 180 fm. level east, the part of the lode which we are carrying is 4 ft. wide, and worth about 6*l.* per fm. In the winze, sinking under the 170 fm. level east, the part of the lode which we are carrying is 3½ ft. wide, and worth 7*l.* per fm. On the Druid's lode we have commenced clearing the western adit shaft, which, from what we can learn from those who may be supposed to know most about the matter (for there is no regular authority to refer to), is about 40 fms. from the adit end. The wheel-pit, and other work, connected with the new stamps, are in as rapid progress as possible; we are very anxious to get this machine in course of working, in order that we may increase our returns. The tribute department is, on the whole, looking tolerably favourable. The quantity of tin sent to smelting-house during the past month is 26 tons 11 cwts. 3 qrs. 20 lbs., realising 1219*l.* 10s. 4d.; and, for the present month, we hope to get about not less than 30 tons of tin—so that our returns are rather on the increase than otherwise; and had not the price of tin been so low as it is at present, we should be doing tolerably well.—Nov. 22.

CUBERT SILVER LEAD.—The ground in the engine-shaft continues hard, as usual. The lode in the 35 fm. level, going west, is still worth from 12*l.* to 14*l.* per fm.; in driving east, in that level, an improvement (within the last two or three days) has taken place; the lode is 2 ft. wide (very promising), yielding some rich stones of lead. In the 25 fm. level west the lode is 1 ft. wide, saving work (but not rich)—say, worth about 4*l.* per fm. In the 15 fm. level, going west, the lode is 1 ft. wide, chiefly composed of mundic, with a little lead—we consider it to be a promising level. The tributers are all working steadily, and most of them have prospects of earning fair wages.

DEVON AND COURTENAY CONSOLS.—In our deep adit level, on the south lode, the lode is 18 in. wide, composed of spar, mixed with killas, containing spots of lead ore. In our engine-shaft the men are progressing with all possible speed, the ground at present is rather hard, the killas being mixed with layers of spar. The pitches on the north lode are looking well, and the men getting wages.—Nov. 23.

DRAKE WALLS.—Brenton's engine-shaft is tinny. The 40 end, east of Brenton's shaft, good work; the 40 stope good work. The 50 end east is tinny, but poor. The 40 end, west of machine shaft, saving work; the stopes below the 40, east of machine shaft, good branches. The 33 end, east of machine shaft, poor; the stopes behind the end tinny. We sampled October ores, on Friday, the 19th inst., computed 22 tons; we calculate on 25 tons this month. Part of our new engine is arrived; the house is ready to receive it, and hope by the middle of January, 1848, to be at work.—Nov. 21.

EAST CROWNDALE.—The ground in the 47 fm. level continues hard—the lode is about 20 in. wide, composed of capel, spar, peach, mundic, and, at times, good stones of ore. We shall commence sinking about the middle of the ensuing week. The lode in the adit level, at Rix Hill, driving west, is about 2 ft. wide, composed of capel, peach, killas, spar, and spots of tin; the lode in the shaft, sinking below the adit level, on the north lode, at Rix Hill, still holds on to its usual size, and is upwards of 5 ft. wide, composed of peach, capel, spar, mundic, killas, and tin; I believe this lode to be worth upwards of 40*l.* per fm. at present. The middle lode, mentioned in my last report, has produced some excellent stones of tin. I think it will be advisable to drive on the cross-cut still farther south, as there is another lode about 3 fms. south from where the end is at present. Our engine and pit-work all in good order.

GREAT MICHELL CONSOLS.—The sumpmen have been engaged during the past week in putting in necessary pitwork above, and dropping a lift of pumps below the 35 fm. level in the sump winze; it being now completed, the sinking is again going on satisfactorily, the lode in which is 5 ft. wide, producing some saving work, and is, in its general character, very promising. In the 85 fm. level, west of the sump winze, the part of the lode now being carried is 3½ ft. wide, containing mundic and spar, intermixed with black, grey, and yellow ore, opening good tribute ground.—Nov. 23.

HOLMBUSH.—The ground in the 132 fathom level, south of the diagonal winze, is still of a favourable character. The ground in the 120 fathom level, west of the great cross-course, and south-west of the slide, is rather hard—the north part of the level being in ironstone; in the 120, south of the old level, and east of the great cross-course, we have driven about 18 in. further south than last reported, but have not met with another branch; there is still water issuing from cross-heads in the end, and we shall not give up our pursuit until the end is extended a few feet further south. The first, or north, part of the lode we have intersected will produce 3 tons of ore per fm.; we have not commenced driving on this part of the lode, nor shall we, until it be proved whether there be a south part or not; the tribute pitch over this level is still a very productive one. The ground in the 120 fm. level cross-cut, south-east of Hitchins's shaft, is hard. The lode in the 110 fm. level south is 2½ ft. wide, composed of soft spar and lead—worth 5*l.* per fm. The lode in the 100 fm. level south is 3 ft. wide, composed of soft spar and lead—worth 5*l.* per fm.; the lode in the 100 fm. level south is 3 ft. wide, composed of soft spar, crystals of blende and copper, with stones of rich silver-lead ores; for the latter mineral it is worth 5*l.* per fm.; the ground in this end is very soft indeed, and a large proportion of the lode is stained with copper: one of the tribute pitches in the back of this level is still productive—the other pitch is rather poor. The lode in the 90 fm. level south is 2 ft. wide, composed principally of flookan, with stones of lead. Our lead parcel weighed 15 tons 5 cwts. 1 qr., and to-day is to be shipped on board the *Erin* trader, Ellford, master, at Plymouth, for Bristol.

KIRKCUDBRIGHTSHIRE.—The bottom of Stewart's shaft is nearly cleared of stuff, and, all being well, shall resume driving the 50 fm. end in the early part of the coming week. The lode in the 40 end, driving west, is 4 ft. wide, with stones of ore, but not rich; the stopes over this level on tutwork are suspended; we have set the less valuable one on tribute at 3*l.* 10s. per ton; in the winze, under this level, the lode is 8 ft. wide, producing 2 tons per fm. The lode in the 30 end west is 4 ft. wide, producing 1 ton per fm.; the stopes in back of this level are of similar value, and are now offered on tribute. The lode in the 20 end west is 3 ft. wide, kindly, but poor for lead; the backs over this level are worth about ½ ton per fm., but suspended, with a view to be let on tribute. Keith's shaft, on the incline, is now 6 fms. 3 ft. 6 in. from surface, where we have the lode 2 ft. 6 in. wide, very kindly. We are getting on pretty well with the dressing, the weather being favourable. One tribute pitch is also set in back of the 30 fm. level, on the caunter, at 5*l.* per ton.—Nov. 20.

LEWIS.—The lode in the engine-shaft is 2 ft. wide, producing some good work for tin, and very promising. The lode in the 60 east is much the same as when last reported; the lode in the same level west, on south branch, is 10 inches wide—worth 20*l.* per fm. The lode in the 50 east is 8 in. wide, opening good tribute ground. All other places are much the same as when last reported on.—Nov. 20.

MENDIP HILLS.—The lode in the 38 fm. level, south of shaft, continues without any particular alteration, being about 4 ft. 6 in. wide, composed of spar, flookan, and iron, intermixed with small particles of lead at times; the lode in the winze, below this level is become very small, and the ground much harder—consequently, I have suspended operations here for the present, and placed two of the men to drive north of Stainsby's shaft (in the 38 fm. level), where we have a very large lode (9 ft. wide), composed principally of flookan, with large branches of soft white spar. In the slag department, in the trench opening across the upper part of the slag ground, we continue to extract some slags, and the beds appear to increase in thickness as we proceed towards the centre of the valley. I am glad to inform you, the engine is nearly completed; we intend to set it in motion to-morrow, after which it will be in readiness to start at any time it may be required; the intermediate pulleys, fan fine of the engine, and stack, are also completed, and the masons will commence with the furnaces, deposit chambers, &c., forthwith. The carpenters are getting on as fast as possible with the tramroad, 260 yards of which are laid in its place, and the smith is busily engaged making the axles, &c., necessary for the waggons.

SILVER VALLEY.—The north branch of the tin lode, in the 50 fm. level end east, is 9 in. wide composed of capel and peach, which contains spots of tin; this branch, in the west end, is of the same size and composition; in both ends water is proceeding from the south side, and the ground being a little softer, we propose to gain both the ends south, towards the south branch, which is larger in the cross-cut, and which will also enable us to give a better opinion where the branches in this level are likely to intersect. For 12 fms. west of the shaft, in the 30 fm. level, the lode is in a disordered state; but from thence, as far west as the end is driven, it becomes in a more settled condition—the chief part of which, in the bottom, is now being worked at tribute; our great object is, to extend the 50 fm. level, with all speed, under this tin ground, where we hope to find the lode in an improved state. At the silver mine, the lode in the 20 fm. level end west is 20 in. wide, consisting of flookan, impregnated with mundic; the lode in the rise, in the back of this level, is 9 in. wide, composed of soft iron, peach, and flookan, and producing a little saving work; the lode in the winze, in the bottom of this level, is in three branches, having 2 ft. horse of killas between each. We hope to hole this winze by the end of the month, when we shall again resume driving the 30 fm. level end west towards the junction of these branches, which was productive in the 20; and which, according to their dip and bearing, will take place about 7 fms. beyond the present end.—Nov. 23.

SOUTH FRIENDSHIP WHEAL ANN.—In the cross-cut south, in the 28 fm. level, the ground, as well as indications, are more favourable; we are intersecting some branches (or veins) of beautiful copper, that we expect are branched off from the lode we are driving to cut; and every fathom we drive towards the lode, the indications are more favourable; and so far as I have seen in the rich mines that I have inspected, I do not see why those indications are not the properties of a rich deposit of copper. Between the crevices (or floors) of the clay-slate, we discover a great quantity of greens, which, of course, must naturally arise from copper. We have about 23 fms. further to drive to cut the lode, according to the underlay of it at the surface. In the 52 fm. level east, the lode is still 4 ft. wide, with two regular smooth walls, composed of large stones of grey mundic, spots of bright yellow copper, and lead, the very like property of the lode in our neighbouring mine—the Great Wheal Friendship.—Nov. 26.

SOUTH WHEAL MARIA.—The cross-cut north, in the 20 fm. level, driving from the engine-shaft, continues much the same, except that it yields more water, as if we were approaching a lode, although we consider we are about 4 fms. from the next lode north; in the cross-cut towards the caunter lode, in the same level, there has been 2 fms. 3 ft. driven; here we have driven west on the course of a lode, 11 fms. south from engine-shaft, under the perpendicular of the caunter lode at surface, but its underlay south, being about 1 ft. in a fathom, prevented our seeing it in this level by driving west. I am glad to say, that we have seen the caunter lode on the back by costeaning, which is the same they are driving east on at Wheal Williams, from their flat-rod shaft, where it is yielding some very good copper and lead ores. This lode, on the back in this sett, is from 2½ to 3 ft. big, composed of a good gossan, prian, mundic, &c., with regular walls, and I consider the appearances highly encouraging.—Nov. 25.

TAVY CONSOLS.—We have sunk about 3 fms., through orey ground, in the shaft; at first, we had a leader about 9 in. wide, which increased to 2 ft., and for the last week, we have had ore all over the shaft; the ground is also much improved, and changed from spar and mundic to a beautiful blue killas—estimated value of the lode in the shaft at present, from 25*l.* to 30*l.* per fm. We sampled 57 tons dry on Friday last, and hope to sample from 70 to 80 tons for the current month. Set a new pitch in the bottom of the 12 fm. level, at 3s. 6d. in 1*l.*; a pitch in the back of the 12, at 5s.; and the western pitch, in the back of the 12, at 10s.—adventurers dress the ore. Set the stamps for two months, at 5s. in 1*l.*—Nov. 24.

TIN VALE.—I have to inform you that adit B measures 43 fms. The lode is from 2 to 2½ ft. wide, and very promising indeed, composed of felspar, blue capel, mica, red flookan, and some tin, with two beautiful smooth walls. I have set 4 fms., at 30s. per fm., which is 10s. less than they had for the last 4 fms.; and the men, I am happy to say, are getting fair wages. Our wheel-pit is up, and the bottom of the pit is paved with rough granite, in order to keep the water from fretting under the walls of the wheel-pit. We shall have all the machinery up this week. I hope to give orders soon to go on with adit A—where we can raise a great deal of tin; and I also wish to continue sinking the shaft, where there is a great deal of good tin to be raised. The sooner I commencethe aforesaid operations, the quicker I shall be paying cost—and that is what I wish to be doing.—Nov. 22.

TINCROFT.—The lode in the 100 end, east of new engine-shaft, is 4 ft. wide, producing stones of ore, and kindly; the west end, same level, is at present unproductive. The lode in the 90 west is 20 in. wide, worth 5*l.* per fm.; the eastern stope, in the bottom of the 90, is worth 20*l.* per fm.; the western stope is worth 8*l.* per fm. The lode in the 80 east is 20 in. wide, worth 6*l.* per fm. for tin; the pitches in this part of the mine are producing fair quality work for tin and copper ore. At Palmer's shaft, we have nearly completed the plat in the 80 fm. level, and shall commence sinking below that level by the end of the week; the lode in the 80, west from Palmer's, is 20 in. wide, about half the width good quality ore, worth 12*l.* per fm. The lode in the winze, to the west of this end, in the bottom of the 70, is 20 in. wide, worth 5*l.* per fm., and kindly; the lode in the 70 west is 5 ft. wide, worth 20*l.* per fm.; the stopes, in the back of the 70, east and west of the winze, are worth 14*l.* per fm. The lode in the winze, to the west of the 70 end, in the bottom of the 60, is 10 in. wide, orey, but we expect the largest and best part of the lode is standing to the south of the winze; we shall cut into it when we get the winze down as deep as the 70 end; the lode in the 60 end west is small, with occasional stones of ore. The 48 end is producing a small quantity of ore, and kindly. The tributers appear to be getting fair wages at their different tributes. At Stainsby's, we have put on more force in driving the adit; we shall have six men driving from the shaft, to meet the other six men driving from East Crofty adit, by to-morrow morning. At Wheal Providence, we are clearing the shaft as fast as possible, and hope to get to the 24 by the end of this week. We are raising some good ore from the pitch in the back of the 12 fm. level. In the south mine, the lode in the 142 east, and the rise, in the back of that level, continue large and tinny throughout. The same may be said of the lode in the winze, in the bottom of the 120, now nearly to the 142; the lode in the 120 east is 4 ft. wide, worth 15*l.* per fm.; the stopes, in the back of the level, are worth 15*l.* per fm. The lode in the winze, and stopes in the bottom of the 110, are 5 ft. wide, worth 16*l.* per fm. for tin and copper ore; the pitches in this part of the mine continue much the same as for some time past.—Nov. 22.

TRELEIGH CONSOLS.—Christoe's shaft, below the 110 fm. level, is sinking in the country; in the 110, east of ditto, the lode is 18 in. wide, worth 6*l.* per fm.; in the 110, west of ditto, the lode is 1 ft. wide, rather more promising, with stones of ore. Garden's shaft, below the 100, is sinking in the country. In the 100 east we are rising in the back, and commenced to rise against the winze, which is sinking below the 90, the lode is 2 ft. wide, no mineral; in the 100, west of ditto, the lode is 2½ ft. wide, with stones of ore only. In the 90, west of ditto, the lode is about 2 ft. wide, worth about 8*l.* per fm., and looking kindly; in the winze, below the 90 east, the lode is 3 ft. wide, worth 15*l.* per fm. In the 80, west of ditto, the lode is 20 in. wide, but little mineral. In the 70, west of ditto, we are sinking a winze, which we expect to hole to the 80 fm. level daily. We have resumed the 60 winze, below ditto; we have now but little water, the lode is 18 in. wide, but little ore. The engine-shaft for Parent is sinking in the country. In the adit cross-cut north we are driving towards the engine-shaft. In the whim-shaft, below the adit level, the lode is 15 in. wide, still stones of ore and mundic, kindly.—Nov. 20.

WEST WHEAL JEWEL.—In the 57 fm. level, west of Williams's cross-course, on Wheal Jewel lode, the lode has not been taken down in the present week; ditto east not taken down in the past week. We have taken the men from the 30 fm. level west, on Tolcarne tin lode, and have put them to drive south in this level to the east of Tregoning's winze, under the eastern stopes, where we have the best course of tin in the mine. In the 20 fm. level, west of Quarry shaft, on Tolcarne tin lode, the lode is 10 in. wide, worth 8*l.* per fm. In the adit level, west of Quarry shaft, on same lode, the lode is 18 in. wide, worth 10*l.* per fm. In the shallow adit level, west of Quarry shaft, on the same lode, the lode is 2 ft. wide, producing little tin, with a more promising appearance than when last taken down. The stopes east of Pryor's winze, on the same lode, are 6 ft. wide, worth 60*l.* per fm.; the stopes west of Pryor's winze, in the back of the 12 fm. level, are worth 25*l.* per fm.—Nov. 22.

WHEAL ADAMS.—The shaftmen are still engaged in rising in the 50, against the winze sunk to water in the 40 fm. level, and we expect to make a communication to-morrow. The stopes, between the 40 and 50, on the quartz-ose lode, are worth 8*l.* per fm.; those in the 40, on the same lode, are set on tribute, to four men, at 10s. in the 1*l.*, on the value of the lead. The shoot of brown blende has improved during the past week; but at present the lode does not produce more than two tons of ore in a fm.; the part of the lode containing the blacker sort will produce about 5 tons per fm., with about ¼ of a ton of potters' lead. The stones, in the back of the 18 fm. level, are being worked for gossan, about 50 tons of which will be broken, brought to surface, and prepared for shipment, by the end of this week. The pitches, on the whole, are looking well. We sampled yesterday, computed 30 tons of silver-lead ore, and 15 tons of an inferior quality, when samples of each parcel were sent to the respective purchasers of lead and silver ores. The samples shall be assayed, and the results made known to you by to-morrow's post.—Nov. 23.

WHEAL ANDERTON.—Up to the present time we have not cut through the lode in the 70 fm. level; it is above 5 ft. big, producing good stones of tin; I am daily expecting we shall take the south wall. All the other parts of the mine are looking well, and, indeed, I do not see any alteration since my last report—while, as we extend our workings, increased ground is laid open. We have now 20 stamp-heads working with the wheel, so that we shall be able to return a brave parcel of stuff. The new steam-engine, for drawing, &c., is nearly completed, and I hope soon to inform you, that she is fairly at work.—Nov. 24.——We have cut through the lode in the 70 fm. level; it is 6 ft. wide, composed of capel, elvans, white prian, and tin—a great portion of which is good saving work. I never saw so strong and promising a lode since we opened the mine; it carries two good walls; and the strata being a blue killas, quite settled. I have set to drive east and west on its course; and, from the dip of the ore in the 60, we are likely to have a fine course of tin ore ere long, as we extend west. The lode in the 60 west is much better than when last reported on, producing splendid rocks of tin, as much as a man can lift; in the 60 east, the lode has made its appearance, east of slide, very regular; it is about 2 ft. wide. We have not yet cut the north wall, which is composed of capel, white prian, and good stones of tin—just the same character as it was in the shaft where we met with the slide. The pitches are holding out well, and producing as much tin, or rather more, than I expected, which is improved. We have 20 stamps heads working attached to the wheel, which is of sufficient power to command them easy. I may say our new engine is all but completed, and the 'fire lit."—Nov. 25.

WHEAL CALSTOCK.—Since our last meeting, we have driven the 30 fm. level west a distance of 55 fms. on the course of the lode, and towards the point of the junction of the different copper lodes, which have been discovered at different times since we commenced working. On the lode on which we are driving there has been a gradual improvement taking place; it is at present 3½ feet big, and carrying more copper ore at the present time, than has yet been seen in it; there is also a large quantity of mundic running with the ore. The level is now driven in a distance of 185 fms., and is approaching the other lodes very fast; the cross-course is expected to be cut daily in the present end; we yesterday opened on the back of it, further south than it has hitherto been seen, and the underlie proved to be east. Our prospects are certainly more encouraging, when we take into consideration, that similar appearances of so many large gossan lodes forming a junction, have invariably been productive of large deposits of ore in other mines. Several of the north lodes, we have every reason to expect, have met about the cross-course. Every thing has been done to ensure success in the operations that have been carried on, whilst, at the same time, every economy has been used to carry those operations out. The amount of money expended to the 31st Oct., 1847, including a period of one year and eleven months, has been 893*l.* 2s. 5d., whilst our liabilities are 123*l.* 2s. 11d., making the total cost from the commencement, 1016*l.* 5s. 4d.

WHEAL COAD.—We are still driving through the most splendid strata I ever saw; we have cut a lode 1 ft. big, composed entirely of sugary spar; we have also cut several branches of mica, from 6 to 8 in. big, underlaying to the lode; we have cut some other branches that carry mundic. We have a good deal of water in our end coming from the lode, which I am sure is not far off; our end is full of branches, and has got harder—worth for driving about 1*l.* per fm., or upwards. We had some agents here inspecting this week, they entertain a good opinion of the undertaking—in fact, they could not do otherwise. I trust to be able to inform you, next week, that we have cut the lode.—Nov. 24.

WHEAL CRUGGLAZE MINE.—Our principal operations in this mine for the last three months have been confined to the working on the iron course; a shaft having been sunk some months since to cut this lode, we have sunk another shaft on the course of the lode, for the purpose of proving it, and ventilating the mine: we have driven upwards of 16 fms. on the course of the lode, and it produces good iron, averaging about 4 tons per fm. We have got in the stulls, for the purpose of working the backs, which are looking very kindly, and may be worked at a moderate tribute. Yesterday I inspected what is termed Wheal Lamb lode, which is Carthew's lode, in Great Hewas sett, which being the north lode in the sett, I saw it at the depth of 12 fms.; the lode is about 3 ft. wide, composed of spar, capel, and having some good spots of tin; I should say this is a very kindly lode, and, from the appearance of the old workings, a great deal of tin must have been risen, as the backs are all stoped away; I think this lode might be seen at the depth of 20 fms., without the aid of machinery for drawing the water, as the Great Hewas Consols adit intersects it about 7 fms. deep, and the hill rising about 15 fms. There are three other tin lodes in this sett, that have been worked on—viz.: Rawlings, Silver Kitchen, and one between the latter and Wheal Lamb lode; these lodes are what is termed the side lodes in Great Hewas Consols sett; there are in all seven lodes that have been opened on this sett; and I firmly believe, that with a small outlay to erect a small engine (chiefly to stamp the tinstuff), this sett might be worked to great advantage.—Nov. 17.

FOREIGN MINES.

IMPERIAL BRAZILIAN MINES.—*Gongo Soco, Sept.* 3.—At Bananal, sufficient house room for about 30 labourers more is now ready, and they will remove on the 6th inst.; a public kitchen for them is also in a forward state, and the store and washing house will be roofed in a few weeks. The adit advances rapidly, as the ground is more favourable than we had dared to hope for. The pit for Walker's new wheel will be commenced within the ensuing 10 days, and during that time, Walker's new engine-shaft will have reached the new deep adit level, and we shall have commenced driving, both towards the vein—which has not been yet examined in this part of the mine—and towards the valley, so as to expedite, as much as possible, the opening of the new adit. The surface water is now most rapidly diminishing, and our Catta Preta wheel has not a full supply; we are, therefore, unable to keep the bottom of the mine (Thomas's shaft) drained. The workmen who had been employed on the gold which is now under water, are driving at the deepest suitable spot towards the south-west, by which means we hope, not only to intersect some of the auriferous cross veins already known to exist in that direction, but also to hasten the unwatering of the second (reported) rich spot. The new water-course will be completed during the present month, and as it will bring the Durno water on the Catta Preta wheel, we hope then to resume working on the productive vein. It gives me unmingled gratification to inform you, that this vein has greatly improved during the last two or three feet of sinking on it; and, although not even now so rich as when we first reached it, it has again shown fine specimens of gold throughout, and looks likely to become still better. Every thing proceeds with the utmost regularity and dispatch, and the captains continue to merit the warmest commendation.

Sept. 13.—I regret to say, that the Gongo Mine presents nothing new worth notice. At Bananal the surface water has so diminished, that our wheels have not power to keep the mine drained; and, not to prolong a struggle that must be hopeless until the rains set in, we have stopped the pumps in Thomas's shaft, and allowed the water to fill it. In the meanwhile, we are making a few trials on a vein from which the former owners took some gold, and which affords us good samples, but without yet yielding any thing for the washing-house. The new water-course advances rapidly, but will be of no use to us for the present, as the loose dry earth in it would for some time absorb all the water entering it—proportionally, of course, reducing the quantity passing over the wheels. The new deep adit is opened rapidly, and the rock in all parts of it continues very favourable. Walker's shaft goes down regularly, and is already below the new adit level. The labourers' village is progressing, and a further reinforcement will be sent during the present week. One part of the house lately bought is ready for the reception of Captain Guy and his family, the other will be prepared for temporary occupation by the new miners. Our rods, pumps, and other preparations for the new wheel and its appendages, are in progress, and every branch of your service proceeds with all the regularity and dispatch we could desire.

Sept. 23.—I am sorry to say, Gongo Mine presents nothing worthy of notice. Little as our gold now is, the greater part of it is procured by breaking up the roads made long since with jacotings—the refuse of the mine in better days; this is so mixed with iron and copper, that its scarcely possible to make it even tolerably clean, and that not without using large quantities of acid. At Bananal, the continuance of dry weather has so diminished our surface water, that our wheels are unequal to keeping the mine drained. Not to waste our force, we have stopped all the pumps, save only that in Walker's shaft. The men who had been employed in the deeper parts will be engaged on the new adit, which is proceeding very rapidly. Our surface works are prosecuted with the utmost diligence, and, I believe, the rainy season will find us fully prepared to meet it. Increased accommodation has allowed us to send 10 more labourers from Gongo during the present week.—Gold workings at Gongo Soco, from 1st to 22d Sept., 6 lbs. 4 ozs. 4 dwts.

NATIONAL BRAZILIAN.—*Cocaes, Sept.* 23.—At the eastern end, we have, very fortunately, met with a small pipe of jacotinga, which, although of no great extent, has been of considerable advantage in driving. In Collett's stopes, there is a greater number of hands employed than there has hitherto been stationed there; having obtained some very good samples from this place, on the 20th and 21st (and yesterday there were some very fair ones taken), there were immediately some additional negroes put to work, and we hope the result will prove beneficial. The old excavation, near this place, is very extensive, and occupies a space in which several veins may pass, and it is evident, from the samples taken, and from the improvement at the stamps during the last two or three days, that we are now in the vicinity, if not on the line, of one of them.

		marks.	ozs.	dwts.	grs.
Produce from Cocaes, for 17 days		8	4	4	38
" Cuiaba "		7	4	0	60
	Mks.	16	2	5	96

ST. JOHN DEL REY MINES.—*Morro Velho, Sept.* 8.—*Produce for August*, 15,365 oits.—147 61-100ths lbs. troy—viz.: 15,191 oits. from 3586 4-10ths tons of ore—235-1000ths oits. per ton; 174 oits. from cobers of Lyon stamps—total 15,365 oits.

It is with great pleasure I have to advise this, the largest produce hitherto obtained, and which, I trust, will be equally satisfactory to the board; the more so, as it is the result of the ordinary working of the mine and reduction departments, without any unusual exertion in either. The whole amount of ore rejected on the spalling-floor, was only 172 tons, or less than 5 per cent. of the ore submitted to the stamps; and, therefore, it seems to me fair henceforth to look for 15,000 oits. as the regular monthly produce, in the absence of any untoward accident. In the present month of September, however, I regret to say, that one of those untoward accidents has occurred, which, I fear, must cause a reduction of 700 to 800 oits. in the month's produce. This accident was the breaking of the Crystees' lent to a most formidable extent, caused by that mischievous insect, the ant, resulting in the nearly total stoppage of the mine and stamping operations during the greater part of two days, as detailed in my diary of the 4th and 5th. These accidents have been of continued recurrance during many years, and the losses sustained by the company in consequence have been very heavy. I think, however, we have now hit upon an expedient (as detailed in my diary of the 7th) that will very much diminish the loss resulting from similar accidents hereafter.

Cost for August (Rs. 27,606 853 at 27½)	£3134 10 7
Produce for ditto, 15,365 oits.; less duties, 7 per cent., 1075—net oits. 14290, at 7s. 6d.	5358 15 8
Profit	£2224 4 5

The consumption of materials this month to value of Rs. 10,152, appears very formidable. The increase over the preceding month may, however, be explained by the necessity Captain Treloar was under, of taking chain and wire rope to the value of Rs. 3047 into instant use, on the very moment of their arrival, instead of spreading this quantity over several months, as would have been the case had they arrived six months sooner. As it was, Captain Treloar deserves great credit, for having made shift so many months with the old and defective chain; and that, notwithstanding the constant breakages occurring therein, his vigilant precautions prevented any serious accident, or loss of life. Under the head of "hired carts," you will observe, that I have succeeded in reducing the charge to a mere trifle—say, Rs. 43 780; during the four preceding months, the average had been Rs. 635 per month.

New Pit Work.—I have much satisfaction in informing you, that the alteration in the pit work in the Bahu is completed, and that the new pumps act admirably. Hitherto the pit work has been a mere make shift; it was commenced on a wrong principle in the first instance, and was subsequently altered from time to time, until at length it became a constant source of vexation, expense, and loss of time. Among other defects, the main rod was small, crooked, and not on the direction of the dip of the lode.

Morro Velho, Sept. 18.—Gold extracted to date, 5934 ozts., from 254 11-100ths cubic feet of sand—23 33-100ths ozts. per cubic foot. Stamps working during eighteen days, 64 37-100ths heads. Supply of stone abundant, except during the almost general stoppage on the 4th and 5th, in consequence of the breakage on the Crystace lest, as detailed in my diary of those dates.

Water.—Mr. Treloar's survey for a new water-course, to tail into the Bananal rego, and to furnish an additional supply of water on the highest horizon of the mine machinery, is at length completed. It would seem, that to obtain about 100 cubic feet of water per minute, we must employ 40 people four months, to make a water-course of 2060 fmc., at an expense of about 400*l.* This additional supply of 100 cubic feet, Captain Treloar says, will be enough for our present wants. Should we hereafter require a still larger supply, it may be had to the extent of 150 cubic feet more, by pushing the water-course 9400 fms. further, with the labour of 40 people, in about nine months, at an additional expense of about 600*l.* Another source, which may furnish a yet larger supply at the highest horizon of the mine works, is the Crystae's water, now brought home (but not to the highest horizon) in the Syphon iron pipes. Wm. Treloar has been sent this morning to make a survey of this water-course, at 1½ to 1¾ mile distance; and should this, as I think probable, be found the most eligible source of supply, we shall require additional iron pipes on both sides of the bridge, to receive the water from a considerable higher level than at present, and to transfer it to an equal elevation on the opposite side. Captain Treloar expresses apprehension, that the pipes crossing the bridge horizontally, may not have strength to bear the additional pressure of water; but proposes to provide against that, by putting iron rings round those horizontal pipes, to strengthen them. In 10 days, or a fortnight, this second survey will be completed; and then the two plans can be compared, and their relative advantages and disadvantages ascertained.

New Stamps.—There has been some difference of opinion between Captain Treloar, supported by Captain Goyen on the one part, and John Rouse on the other, as to whether the new stamps should consist of 40 or of 30 heads—Captain Treloar advocating the former, and John Rouse the latter. This is now settled by a sort of compromise, and it is agreed that they shall consist of 36 heads, worked by a 50 ft. wheel. We have now about 850 cubic ft. of water going over the Warre and Susannah stamps wheels—very much more than they require, but which will be all wanted for the new 36-head stamps. It is intended, therefore, when the new stamps are finished, to take down the Warre and Susannah, of six heads each, so that our numerical gain would be only 24 heads; but our actual gain will be much greater, owing to the superior efficiency of the new stamps over the old and nearly worn out Warre and Susannah. There are cog-wheels on the spot, which will answer for our new stamps, and the pinion wheels will be ordered at Rio.

Mine.—I am glad to inform you, that sinking has been resumed, as well in the Bahu as in the Gamba sumps; 16 borers have been placed in the former, and will be increased to 18; 12 borers are on the Gamba sump.

CASCADE MINING COMPANY.

The usual two-monthly meeting of adventurers was held at the British Mining Offices, 41, Moorgate-street, on Wednesday, the 24th inst.

G. W. Blanch, Esq., in the chair.

The circular convening the meeting having been read, the Secretary proceeded to read the following

REPORT.

The report and statement of accounts, which the committee have to submit to the shareholders this day, must, of necessity, be very limited—the mine having been but a very short time at work, although discoveries have been already made, which warrant the full belief that most important results will follow. The lease is granted for a term of 21 years, at the moderate royalty of 1-14th. The river Lyd flows through the estate, which can be made available for working machinery, crushing ores, or for any other purposes, thereby saving the great expense of erecting and working a steam-engine. Six lodes, or mineral veins, have already been discovered—five of them running nearly east and west, and the other north and south, as exhibited in the map. All the lodes have been opened at the surface, and found to produce gossan, flookan, quartz, and spots of copper ore, the strata and indications generally being precisely similar to those of Wheal Friendship (a short distance to the south-east), which has paid enormous dividends to its proprietors. The Susan lode is a large champion lode, six feet wide at the surface, and is supposed to be the same as the one opened on the adjoining mine, and which produced rich copper ore at a depth only of 10 fathoms. The cross-course, or head lode, is one foot wide at the surface. An adit level has been commenced at the point A (marked in map), and it is intended to continue it on the course of the lode into the hill, which rises very fast, and by this means the river lode will be intersected at 30 fathoms, the road lode at 40 fathoms, the Susan lode at 50 fathoms, and the south lode at 60 fathoms under the surface. The whole of these lodes will thus be opened to a considerable depth, without the expense either of sinking a shaft, or erecting machinery; and the committee are advised by their agent, that large quantities of copper ore may be expected when these lodes shall be intersected at their respective points. This mode of exploring the mine, though very inexpensive, will necessarily occupy some time, and the committee have, therefore, to request the patience of the shareholders, until these several lodes are opened upon. At the same time, they wish it to be understood, that no funds, beyond the sale of the shares still unappropriated, will be required for the purpose. The district in which the Cascade sett is situate, is so strongly mineralised, and the strata so congenial for the production of large quantities of copper and lead ores, that your committee entertain most confident expectations of the announcement, within a reasonable period, of highly favourable and profitable results.

The accounts submitted showed the amount received and due on account of shares sold, was 510*l.*; the value of the 514 shares unsold being estimated at 1028*l.*, thus making a total of 1538*l.* On the other side, the costs for the months of August and September amounted to 335*l.* 15s. 6d., thus showing a cash balance of 174*l.* 4s. 6d., in addition to the shares unsold.

It was moved by Mr. Shearman, and seconded by Mr. Molyneux, that the report and accounts, as laid before the meeting, be passed, which was carried.

Two of the members of the committee having withdrawn, Mr. J. Truscott was added to the committee, the other members being re-elected.

It was moved by Mr. Shearman, and seconded by Mr. Reid, that the sum of 5*l.* 5s. per month be allocated to the finance committee, for services rendered by them.

A conversation having taken place on the subject of the contemplated operations at the mine, Mr. Snell observed, that the report of the finance committee entered so fully into detail, that it was hardly necessary he should make any observation. He might, however, draw attention to the fact, that in driving a cross-cut to intersect the several lodes, the time occupied would not exceed six to eight months, and in taking the several lodes, such would be at a depth of from 30 to 60 fathoms from surface.

Thanks having been voted to the chairman, the meeting dissolved.

GADAIR MINING COMPANY.

The ordinary bi-monthly meeting of adventurers in the above mine, was held pursuant to notice, at the British Mining Offices, on Wednesday, the 24th inst.—G. W. Blanch, Esq., in the chair.—The circular convening the meeting having been read, the Chairman congratulated the proprietors on the report which had been prepared by the finance committee, and which would be read by the secretary, feeling assured, as he did, that it would not only be deemed satisfactory, as the result of the measures which had been adopted up to the present time, but as holding out prospects which could not be considered otherwise than gratifying, whether with reference to copper specimens, some of which from the lodes or branches were laid on the table; but, also, with reference to the marble on the estate, a small slab of which, in a polished state, was also submitted, with an analysis of the fire-clay, which will be found subjoined.

The following report was then read to the meeting:—

In presenting you with the accounts and report of this mine, the committee have every reason to be satisfied with its condition and prospects. The lease which we held at the commencement of working this mine, had only 10 years unexpired, at a royalty of one-eighth. The shareholders will, therefore, be glad to hear, that this lease has been surrendered, and a new one obtained for a full term of 31 years, at a royalty of one-sixteenth.

Our agent, Captain Clymo, has very recently made a most minute survey of the mine, upon which this report is based. The map will show the numerous lodes already discovered, as well as a large bed of marble, and vein of fire-clay, which we shall notice under separate heads. The Houndscave lode is a large champion lode, on the course of which an adit has been driven a considerable distance by the former proprietors; and we find, that in sinking five fathoms only below the adit level, some good copper ore has been met with, of an extremely rich quality. The men have commenced driving a level from the sea, to intersect the Fox lode, by which operation the sulphur lode will also be intersected, where, from the appearance of the lode on the cliff, there is every reason to expect a deposit of ores. The west point lode will also unite with the Fox and Houndscave lodes, near the east end of the adit, which is a matter of very considerable importance—inasmuch as lodes are generally found productive at the point of junction. Your committee find, however, that it will be necessary to have a steam-engine erected immediately, and we shall take the proper measures for obtaining a good one, so that we may sink as fast as possible for those metals which your agent thinks we shall find in great abundance.

Your committee refer, with great satisfaction, to the encouraging indications which the mine exhibits, both in its general features, and the more particular development of its various lodes—within a very short distance of the celebrated Parys Mountain, it partakes largely of the character and features of that "mine of wealth;" and, without presuming to hope that the Gadair will equal its neighbour in the quantity of its ores, we are, nevertheless, assured by competent judges, that it excels her in regard to quality. Your committee, therefore, fully anticipate, that by a spirited and judicious outlay of capital, the most beneficial results will accrue to the shareholders. The marble has been discovered in the south-western part of the estate, and is about 60 ft. wide, and of great length; in colour it is variegated—the ground being of a very rich claret, with veins of white and green running through it. It is of the Italian kind, and admirably adapted for ornamental sculpture. Immense quantities can be raised in large blocks, convenient for cutting into any form; and the facilities for shipping it (being close to the beach) are very great. Your committee are fully justified in regarding this marble as a certain source of annual profit to the shareholders. The fire-clay lies in a large cross-course, or vein, running nearly north and south, about the centre of the estate; it is 10 ft. wide, and close to the sea. Large quantities can be raised and shipped at a trifling cost, and thus another means of increasing their gains is secured to the shareholders. In looking at this estate, teeming with its products of copper, marble, and fire-clay, the committee congratulate the shareholders upon the prospects of this most valuable concern; and, notwithstanding the operations will be upon a scale of great magnitude, they confidently expect to bring them into a profitable condition, without any further funds than those arising out of the sale of the shares still unappropriated.

The following is an abstract of the accounts submitted:—Produce of shares disposed of, 403*l.*; in addition to which was the value attached to the unappropriated shares, 5992*l.*—making an aggregate amount of 6400*l.*; while the expenditure up to, and including Sept. cost, was 271*l.* 19s. 9d.; leaving a cash balance of 130*l.* 0s. 9d., exclusive of the value of the unappropriated shares.

A report from Mr. Charles Watt, jun., of the Chemical Works, at Battersea, was read by the Chairman, from which it appeared, that the fire-clay, on analysis, yielded silica, 80; alumina, 16; oxide of iron, 1; water, 3—100; and which he considered well adapted for use as fire-clay or fire-brick, perhaps better for the latter, as its mechanical state was such as that required for the purpose.

Mr. Molyneux, in directing the attention of the meeting to the specimens that day submitted, wished it to be understood clearly that they had been obtained at a shallow depth, while the quality was of a higher produce than that ordinarily acquired.—Mr. Taunton (the secretary) considered it right to state to the meeting, that the portion of the report having reference to the nature of the ores, and the comparison made with the highly-productive mines, known as the Parys and Mona Mines, which were in the immediate locality, had been derived from parties practically acquainted with the district by himself, on paying a visit to the mine on a late day. He felt it his duty to make these observations, as being able to confirm, by personal investigation and inquiry, the correctness of the representations embodied in the report.

After some desultory conversation, and the opinions expressed by Mr. J. Trnscott and other gentlemen who had visited the property—and a reference to the survey and report of Capt. Clymo, which were entered upon at some length, and a vote of thanks passed to the chairman—the meeting adjourned, the minutes being duly signed by the proprietors present.

KILBRICKEN MINING COMPANY.

At an adjourned meeting of adventurers, held at the Grand Hotel, Coventgarden, on Saturday, the 18th inst.

Henry Crockford, Esq., in the chair.

The minutes of the last meeting having been read and confirmed, the following report, from Capt. R. Williams, of the Godolphin Mines, was submitted:—

Report of Kilbricken Silver-lead Mines, in the County of Clare, Ireland.

I find, on my inspection of these mines, that the orey ground I left on my removal, is worked away to a great extent; and in the new bottoms, which are now worked under water, there is a bunch of ore said to be 12 or 13 fathoms long, and from one to two feet wide: this is a continuation of the large bunch which I left, it being upon the limestone, and under the great spar; and, from there being a large spring of water rising through it, and the position in which it is situated, I infer it will continue in depth, although it is nothing near so good as when I left it, but its size will be always varying as it descends, so that in a fathom or two below it may improve again. In sinking the shaft 7 fms.—that is to the 30 fm. level—and driving from thence towards the floor, it is probable it will be thus intersected in six months from the time Wyld's engine goes to work, which, should the cost not exceed 200*l.* a month, will take 1200*l.* From its altered appearance in the present bottoms, to what it was when I left it in the winter of 1845, it would appear to be diminishing in its descent considerably, so that it is difficult to say what its monthly yield is likely to be in the 30 fm. level. Nevertheless, there appears to be little doubt but that, between the 30 fm. level and the present bottoms, there must be a very considerable quantity of rich ores, however poor it may be below that level. Although I am still persuaded, from the ores in and about Crockford's shaft, and the great spar going that way, that this floor will continue in depth, notwithstanding its being poor in places—in fact, it may be much larger in the 30 fm. level than it is at present; and I should think that 20 tons of ore, worth 30*l.* per ton, may be safely calculated upon as the monthly return, on a monthly cost of about 200*l.*; no doubt, as the ground is opened that the monthly returns will increase, especially after a communication is made on the floor from the 30 to the 20 fm. level—if a larger quantity is raised, of course, the cost will be proportionately more. If the ore around the late new engine-shaft is raised while Wyld's shaft is sinking, this may increase the cost for the six months, perhaps about 100*l.*; but the pitwork should not be removed from that shaft until the winter floods are judged to be nearly past, unless you get a purchaser for the engine who may want it immediately, as it will be better to work that engine again for a short time, to fork the water, if the mines should be flooded, and thus sacrifice a few pounds in coals, than to keep the whole establishment idle, waiting for the water to be out. If you keep this engine and pitwork entire for (say) three months, and find that Wyld's engine can keep the water well, even in the wettest season, then you may with safety take up the pitwork, and work the ore ground around that shaft. I fear that you cannot work Wyld's engine with a bucket in the plunger-lift, without another lift beside it, for want of a balance to put her out, the rods not being heavy enough to resist the pressure of the water that would be rising against them. It is probable that from 15 to 20 tons of ore may be raised about the late new engine-shaft, besides a deal of jack, but its quality will be doubtful; it may be worth 200*l.* or 400*l.*, as the galena or carbonate may prevail, or it may terminate suddenly and only turn out 3 or 4 tons: while, on the other hand, should it make a shoot upwards, it may turn out a great deal more than what is calculated above. It is probable that Wyld's engine will be ready to go to work by the 20th inst., or within two or three days of that time. I have sent you a calculation of the probable expense of working the mines, also an estimate of the value of the spare materials, and of the whole of the materials left.

The report was adopted; the directors authorised to draw 21s. per month for attendance; and Mr. Gainer elected a director.

WHEAL ANDERTON MINING COMPANY.

A meeting of adventurers was held at the Royal Hotel, Plymouth, on the 7th Nov. Capt. Isaac Toby, R.M., in the chair.

The Chairman read the notice convening the meeting, with the accounts, and the captain's report; whereupon it was resolved unanimously, that the accounts as audited and found correct, be passed, and that Capt. Carpenter's report be received, and is considered satisfactory. A call of 1*l.* per share was made, such call to be paid to the purser, on or before the 28th inst., and that, in default of such calls being paid, the regulation as to forfeiture be enforced. A motion to the effect, that a proposition be made to the adventurers at the next meeting, that the number of shares be increased from 237 to 240, and that such three additional shares be presented to Capt. Carpenter, was unanimously carried, and, thanks having been given to the chairman, the meeting adjourned until 12th January next, to be held on the mine.

The following is an abstract of the accounts submitted:—Tin and copper ores sold since last meeting, 267*l.* 2s. 5d.; received arrears of calls, 25*l.*; call made 22d July, 217*l.*; which, with a balance due to the purser of 357*l.* 3s. 3d., gave a total of 866*l.* 5s. 8d.—On the other side, the balance due, as per last statement, was brought forward, amounting to 204*l.* 4s. 10d.; labour cost, July, August, and September, 348*l.* 10s. 6d.; merchants' accounts, 170*l.* 2s. 2d.; lord's dues, 18*l.* 1s. 3d.; and sundries, 125*l.* 6s. 9d.—giving a total, as on the other side, of 866*l.* 5s. 8d.—The following report from Capt. Carpenter was read:—

Wheal Anderton Mine, Nov. 16.—We have sunk the engine-shaft 5 ft. below the 70 fm. level, cut a plat at that level sufficiently large to answer the intended requirements, being 12 ft. long, 10 ft. wide, and 10 ft. high, so as to allow us to have a fall for the stuff broken (under the level). I intend to drive at the 70; we have cut into the capels or north part of the lode at said level, about 2½ ft., which we find hard and wet, producing good stones of tin—it is regularly formed, both as regards the run or course, I anticipated, as well as its regular underlay, being 18 in. in every fm., from the 60 to the 70; I am much pleased as to its proper course, more especially as it was confused by a slide in the 60, just above this point, and have strong reason to believe it will be a productive lode for tin ore, as the ground is in a very settled state, and the lode firm in itself, so far as seen; therefore, my object is to cut through it as fast as circumstances will admit of, and drive east and west on its course, to get under the ore ground, already discovered in the 60, which, I am happy to say, still continues productive in the stopes working. Three pitches are set in the 60—one at 4s. in the 1*l.*, the other two at 6s. each; and I confidently anticipate the tributers will raise a sufficient quantity of tin to disburse the cost of the mine, with the exception of the new machinery erecting and nearly completed; therefore, with a very trifling expense, and a continuance of the ore at the 70, profits must naturally be the result of our operations. The lode in the west end of the 60 is 4 ft. wide; the north, or leading part, from 14 to 16 in. wide, is very good for tin; the backs, from present appearance, can be worked from 3s. to 4s. in the 1*l.*; in order to accomplish this object, I am having the level pressed on with all possible speed, to prepare for setting a pitch in the ensuing month. The lode in the 60, east of shaft, has hardly formed itself entirely regular through the slide; however, it is a very kindly lode, and on opening, we make sufficient discoveries to set tribute at 6s. in the 1*l.*, men at the same time getting a fair remuneration for their labour at that price; therefore, the prospects of the mine, on whole, is very encouraging, so that the slightest doubt does not exist in my mind but the mine, ere long, will pay the adventurers handsomely for their outlay and perseverance. You must be aware, the thing could not be effected satisfactorily without the application of power, which is now ready to put in motion; in fact, the new stamps are attached to the wheel, answer remarkably well, and do their anticipated duty. The drawing machine is also nearly ready, and attached to the new steam-engine, to put us in such a position as to command our future operations at pleasure, without being impeded in the fluctuating seasons. The shaft is repaired and made replete to the 70, to receive the kibbles that will be drawn by steam; the pit-work answering the intended purpose; dressing floors laid out, to allow us to make such advances as we may require in the cleaning department; as also roads for the transit of tin and materials; together with the principal excavations in buildings, drains, &c. This work, of course, appears to be costly, but a foundation laid, the structure cannot be reared without a cost, which, I must say, has been as limited as possible. I now beg to conclude, in giving you this cursory report; it is done with that faith and pleasure I have long looked for, and I may say, my best hopes and wishes are, in a great measure, realised.

P.S.—This morning I have received further information relative to the lode in the 70. It appears the capels are cut through, and south of them is the already seen, about 1 ft. wide, similar to the specimens brought me, which I have the pleasure to present at this meeting.

WHEAL MARY ANN MINING COMPANY.

At a general meeting of the shareholders, held at the White Hart Inn, Liskeard, on Wednesday, the 24th inst.—Capt. Peter Clymo, Jun., in the chair,—the accounts for August and Sept. months, showing a balance of 73*l.* 5s. 11d., were allowed and passed, and carried to the debit of next account.—It was resolved, that Capt. Hodge's salary be increased to 6*l.* 6s. per month from the 1st of October inst.—The following report, by Capt. P. Clymo, Jun., was read to the meeting:—"The lode in the 30 fm. level, south of Barratt's shaft, is 3 ft. wide, and worth 18*l.* per fm. The stopes are producing fair quantities of lead. Pollard's shaft is sunk 5½ fms. under the 15 fm. level; here we have eight miners and four wages men employed, who work Saturday afternoons and Monday mornings, by one clock, in order to sink the shaft with all possible dispatch, and, by so doing, we calculate to get down and cut the lode in the 30 fm. level by the end of February next. The lode in the 15 fm. level, south of Pollard's shaft, is 15 in. wide, composed of gossan, can, and some lead. We shall, on Saturday next, sell 40 tons of lead, which we calculate will pay our present debt, and hope to sample 50 tons more in two months from this time; and, in conclusion, I beg to say, that it is my opinion we shall ultimately have a good and profitable mine."

WHEAL BARBARA MINING COMPANY.

A meeting of the adventurers (two-monthly) was held at the British Mining Offices, Moorgate-street, on Wednesday, the 24th inst., pursuant to circular.

G. W. Blanch, Esq., in the chair.

The notice convening the meeting having been read, the Chairman stated the objects for which the meeting had been convened.—The Secretary proceeded to read the report of the committee, which briefly referred to the accounts and report received from Capt. Stephens on the mine.

The following is the report of Capt. H. F. Stephens, submitted to the meeting:

Since the present company has possessed this mine, Quarry shaft has been sunk to the adit level; Williams's, or engine, shaft to 7 fms. below the adit level; driven east 60 fms.; Ravine adit 17 fms. east, and 3 fms. south; cross-cut north from Quarry shaft 6 fms.; in driving the Ravine adit, we found, at 9 fms. west of Williams's shaft, the lode producing good stones of ore—improving much, until within 13 fms. of the same, where it is intersected and disordered by several small branches. At 10 fms., east of Williams's shaft, the lode produces very fine silver-lead ore at the adit, and continues to improve in the winze below the adit. Williams's shaft was sunk to 7 fms. below the adit, by aid of a horse engine; the plenitude of water at this depth prevented further sinking, I, therefore, cut the lode at this point by a cross-cut north 2 fms.; drove east 10 fms.; west 3 fms.—here the lode let in additional water, precluding all further working by horse-power, and, consequently, all below the adit level. Since that time the adit level has been extended east on the course of the lode 10 fathoms; the cross-cut from Quarry shaft, towards the northern lodes, 4 fms. (these drivings are included in the above); in the latter six men are employed, at 5*l.* 10s. per fm.; 14 fms. from the present end will intercept two other lodes, seen only as yet at surface; the adit east, being driven by four men, at 2*l.* 10s. per fathom, will determine the course and nature of the lode throughout that part of the sett; two men are also engaged in filling and hauling the stuff.

Future Operations.—I propose erecting the engine in Williams's shaft, to continue this shaft to the 15, 25, and 35 fm. levels; and, by flat-rods and bobs, to extend the Quarry shaft on the course of the lode to corresponding depths, and levels to be communicated in succession hereafter. These operations will give ample proof of the value of No. 1 lode, by which I expect to lay open a valuable and lasting property. The northern lodes will be opened by the adit level cross-cut about, or as soon after, the time of working the engine; whether these be prosecuted by independent flat-rods, shafts, or cross-cuts, from the present, can only be determined by circumstances as developed—very important features, of much value, will, undoubtedly, be here laid open.

From the accounts laid before the meeting, it appeared that the costs for July, August, and Sept., amounted to 227*l.* 11s. 9d.; in addition to which, bills due, 25*l.* 4s. 1d., which, deducted from cash balance at last meeting of 476*l.* 2s., left a present balance of 223*l.* 6s. 2d.; to which, adding 540 reserved shares, valued at 3*l.* per share, 1620*l.*, made an aggregate balance of 1843*l.* 6s. 2d. The accounts, having been duly audited and laid upon the table, were passed.

The report of the committee, with that of Capt. Stephens, having been read, it was resolved, that the same be entered on the minutes and circulated.

Mr. Truscott stated, that he had received a communication from the mine, to the effect, that the engine purchased from the Tretoil Mine, 21-inch cylinder, with 9 and 7-feet stroke, and 8½ tons boiler, was in course of removal, and that the several bargains had been entered into for the erection of the necessary buildings, &c.

Appended to the report of Capt. H. F. Stephens, was an estimate of the cost of engine, engine-house, machinery, &c., including the cost of two months' working, with pitwork, including 30 fathoms 9-inch pumps, &c.—in all, to the sum of 699*l.* 10s.; to which was added, 342*l.*, being the estimate of labour and other expenses for four months, ending 31st March, 1848—thus making a total of 1041*l.* 10s., as the full expenditure up to that period.

On the motion being made for the re-election of the finance committee—Mr. Snell stated, that, in consequence of Mr. D. Williams's non-residence in town, he was desirous another adventurer should be placed in his stead—whereupon it was resolved, that G. W. Blanche, Esq., be elected in the room of that gentleman, and the remaining four members of the committee be re-elected.

Mr. Snell begged to draw the attention of the meeting to the circumstance of the non-payment of the committee for services rendered, and submitted that the sum of 5*l.* 5s. per month be allowed to the committee, to be divided in such manner as they may think fit.—The motion having been moved by Mr. Shearman, as representing a large majority of the adventurers resident in Manchester, and seconded by Mr. Reid, the same was passed unanimously.

It was moved by Mr. J. Truscott, and seconded by Mr. Shearman, that Capt. H. F. Stephens be paid 6*l.* 6s. per month for his services as general superintendent of the mine; and that the salary of Capt. W. H. Stephens, as underground agent, be fixed at 5*l.* 5s. per month, which was accordingly carried.

Thanks having been voted to the auditors and the chairman, the meeting separated—the several adventurers having duly signed the minutes.

WHEAL CONCORD MINING COMPANY.

A special general meeting of the shareholders was held at the offices, 4, King-street, on Friday, the 26th instant, pursuant to circular.

W. Morrison, Esq., in the chair.

The meeting, although not numerously attended, was one of a stormy character—indeed, such as to preclude any report, but that of a general nature; much discursive matter being entered into, and personalities, which we cannot be expected to report.—The Chairman having called upon the secretary to read the correspondence which had lately taken place between himself and the purser, the question was raised, whether the latter was present, and, furthermore, if the accounts had been audited?—In reply to which, Mr. English, as one of the auditors, stated, that he had ever been ready to audit the accounts; but that the vouchers were not forthcoming, while he had been given to understand, that Mr. Harris, his coadjutor, was no longer a shareholder.

Mr. George Snell, the purser, having subsequently attended the meeting with the cost-book, an angry discussion arose as to the accounts—which, in the end, was resolved by the appointment of the chairman and Mr. English to audit the same.

Mr. Dayrell, the late high sheriff for Buckinghamshire, could not assent to the proposition submitted to the meeting with reference to the committee, and moved, as an amendment, that certain gentlemen, whose names he gave, should be appointed as a committee, and who should, further, be empowered to audit the accounts. He complained that he had been served with a writ, for the payment of arrears; and entered into much matter, foreign to the objects of the meeting. He considered that the committee, if formed, should be constituted of the principal proprietors; and objected to Mr. English forming one of that body.

Mr. English, in reply, stated, most expressly, that the interest held by him, was simply with the view of protecting others. He warmly expressed his feeling as to the conduct of Mr. Dayrell—at the same time, observing on the consequences necessarily attendant on the arrangements not being perfected—inasmuch that Mr. Dayrell, or any other shareholder, might, and, doubtless, would, be made responsible for the entire debts of the concern, which he understood to be 1200*l.* or 1300*l.* He disclaimed any object which it would appear that Mr. Dayrell would infer, beyond that of benefitting the proprietors generally, being merely the representative of others, and more especially the lord of the mine, who had been prosecuted, while the present body of adventurers were allowed to go free.

The Chairman regretted, that personalities should be indulged in, as the object of the meeting was to come to such an amicable arrangement as might not only be satisfactory to themselves, but, at the same time, put them in a position to liquidate the claims on the company. He begged to refer to the accounts laid on the table, whereby it appeared, that a sum of 400*l.* or 500*l.* had been received by the purser, but which had not been accounted for, as appeared by the balance-sheet produced by Mr. Crofts.

Mr. G. Snell, in reply, stated, that the Cost-book was then on the table, and that he was fully prepared to enter into, and vouch for, the accuracy of the accounts, and which were, subsequently, referred to the auditors—he having expressed his perfect readiness to attend, and explain the items.

In the course of the proceedings, it appeared, that the machinery belonging to the mine, for which 1200*l.* had been offered, and an agreement entered into for the sale at such sum, as so stated by Mr. G. Snell, had been sold for 175*l.*, under circumstances, but which, as they will, doubtless, be mooted in one or other of the law courts, it would not be right further to refer to.

A committee, consisting of Messrs. Davey, Morrison, and Pickering, was then appointed—it being understood that the auditors would afford them every assistance, as regarded the accounts, and the meeting adjourned till Wednesday next, when the auditors and committee would make their report.—A vote of thanks having been passed to the chairman, the meeting separated.

We have to regret the warmth of feeling, and the personalities indulged in, at the meeting, as tending much to the injury of mining enterprise, and trust that our next report will be more full, when the acerbity of feeling may be less displayed, and business matters alone discussed.—The meeting lasted nearly four hours; and the real business might have been disposed of in one-eighth the time.

WHEAL TRELAWNEY MINING COMPANY.

At a general meeting of shareholders, held at the Fountain Inn, Liskeard, on Tuesday, the 23d inst., the accounts for July and August months, being first duly examined, were allowed and passed, and the balance of 25*l.* 2s. 7d. carried to the credit of the next account. It was resolved, that Mr. J. Phillips associated with Capt. J. Bryant in the finance department of Wheal Trelawney Mine, and that all drafts and cheques be drawn in their joint names.

The accounts showed—By Tamar Smelting Company, for lead ores, 79 tons 0 cwts. 2 qrs., at 15*l.* 19s. 6d. per ton, 1166*l.* 11s. 1d.; ditto, 72 tons 12 cwts. 1 qr., at 16*l.* 7s. 6d., 1188*l.* 11s.; received of sundry persons for sand, 2*l.* 1s.; received of Wheal Trehane adventurers, for the use of Trelawney's engine and water for dressing their ores, 1 month, to 17th September, per contract, 16*l.* 10s.—2373*l.* 13s. 1d.—By July cost, 794*l.* 15s. 5d.; for August, 874*l.* 17s. 10d.; balance brought forward, 708*l.* 19s. 10d.—2373*l.* 13s. 1d.—Balance from end of June, 445*l.* 17s. 3d.—leaving balance, carried to the credit of next account, 25*l.* 2s. 7d.—The following report was presented:—

Wheal Trelawney Mine, Nov. 22.—Phillips's shaft is sunk 3 fms. 4 ft. under the 26 fm. level, where the ground is somewhat harder than it has been. The 32 fm. level is extended north and south about 24 fms. on the course of the lode; the back, on an average, will produce 1 ton of ore per fm.—the price for stoping is from 40s. to 50s. per fm.; the north

and is at present worth 12*l.* per fm.; the south end is worth 14*l.* per fm. The 42 fm. level is driven south within 4 fms. of the boundary; the end is poor at present, although not without lead; this level north is worth 8*l.* per fm., the lode is large, and easy for driving; the stopes in the back of this level are producing a fair quantity of ore. The rise in the back of the 32 fm. level north is worth 7*l.* 10*s.* per fm.; the stopes in the back of this level are much as usual, producing a moderate quantity of ore; in the winze, sinking below the 33 fathom level, there has been a very good lode, but we have water in it at present; the 42 fm. level north is nearly under it, which we expect will drain it shortly. We have to-day commenced sinking Treleawney shaft under the 42 fm. level, and also driving the 42 cross-cut towards the lode. The 22 fm. level cross-cut, east of Trelawney shaft is driven through a branch composed of flookan, and a little mundic, and spar, where a great deal of the water is coming from at present. At Vivian's shaft, we are stoping a piece of ground north of the winze, under the 20 fm. level, where the average value of the lode is about 7*l.* per fm.; there are 6 ft. of water in the winze, which we expect will be drained by Trehane 30 fm. level, within a month; after which, we shall extend the 20 fm. level north with all possible speed, to explore that part of the mine, where, we have not the least doubt, but that a great quantity of ore will be raised. In conclusion, I would beg to remark, that, although there is not in this mine, as there are in many others, courses of ore worth from 70*l.* to 100*l.* per fm., yet it should be borne in mind, that in those mines there is a great quantity of lode that will never pay for taking away; while, in Trelawney, the lode throughout is one continuous course of ore, and there is no part of it but will pay well for taking away.

TREVISKEY AND BARRIER.—Statement of accounts for August and Sept.—TREVISKEY: Amount of ore sold July 22 (less 17*l.* 12*s.* 8*d.* for lord's dues), 1888*l.* 0*s.* 1*d.*; for materials, 12*l.* 15*s.* 1*d.* = 1900*l.* 15*s.* 2*d.*—Labour cost for August and September, 801*l.* 3*s.* 3*d.*; tribute of ore, 107*l.* 12*s.* 3*d.*; merchants' bills, &c., 409*l.* 12*s.*; Tresavean adventurers' engine cost, &c., 116*l.* 7*s.* 3*d.*—showing profit of 466*l.* 0*s.* 5*d.*; add balance in hand end of July last, 85*l.* 8*s.* 7*d.* = 551*l.* 9*s.*—By dividend of 4*l.* 10*s.* per share, declared July 22, 540*l.*: leaves 11*l.* 9*s.* to be carried to the next account.—*Report:* "In Michael's shaft, sinking below the 248 fm. level, the lode is 2½ ft. wide, producing 2 tons of ore per fm., and has a promising appearance. In the 248 fm. level the lode is 3 feet wide, worth 40*l.* per fm. In the 236 fm. level the lode is 18 in. wide, producing 3 tons of ore per fm. In the winze, sinking 9 fms. below the 236 fm. level, the lode is worth 36*l.* per fm. The 200 fm. level is still unproductive. In the 188 fm. level the lode is 18 in. wide, producing 1 ton of ore per fm. The lode in the 176 fm. level, driving east, is small; the winze below this level is communicated to the 188. We are driving the 30 fm. level south, in expectation of meeting with a lode. We have put up 130 fms. of flat-rods, drawn out the water, cleared up Williams's old sump shaft (which is 18 fms. below the adit), and find the lode to be 18 in. wide, composed of spar and stones of good ore; we hope to commence sinking this shaft next week below the 18 fm. level. We sampled on the 10th inst., 364 tons of ore, and expect to raise 350 tons for Nov. and Dec."—BARRIER: Amount of ore sold July 22 (less 27*l.* 12*s.* 6*d.* for lord's dues), 359*l.* 3*s.* 2*d.*—Labour cost for August and Sept., 90*l.* 18*s.* 5*d.*; tribute of ore, 97*l.* 7*s.* 7*d.*; merchants' bills, &c., 61*l.* 12*s.* 3*d.*; Tresavean adventurers' engine cost, &c., 89*l.* 5*s.*; half-year's income tax, 13*l.* 7*s.* 6*d.*—showing profit, 56*l.* 12*s.* 5*d.*: add balance in hand end July, 71*l.* 9*s.* 7*d.* = 128*l.* 2*s.*—Dividend of 1*l.* per share, declared Nov. 22, 120*l.*: leaves 8*l.* 2*s.* to be carried to next account.—*Report:* "We sampled on the 10th inst., 72 tons of ore, and expect to raise 60 tons for November and December."

TROWAN CONSOLS (near St. Ives).—At the quarterly meeting of adventurers, held on Tuesday last, the 23d inst., the accounts presented showed a profit of 136*l.*, after payment of bills, &c.—Capt. PENBERTHY declared, that he had not the slightest doubt, but that this mine would give a far better profit next quarter. The agent's report shall be given next week.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

TREVEAN MINE is situate in the parish of Perranathnoe, near Marazion. The silver gossan ore of Trevean, marks an era in the mining of Cornwall This gossan does not present to the eye, even by the aid of the microscope, the slightest trace of silver, although some of the richest specimens yield to the assayer from 25 to 30 per cent. of their weight of silver. It is supposed to exist in the condition of a muriate, enveloped in a brown oxide of iron, forming a pulverulent ore in a matrix of black hematite iron; but the workings at present are limited to the crown of the vein. In addition to the brown oxide of iron, there are traces of lead, and the lower portion of the workings show arsenical iron. It is the opinion of the miners that, in depth, this lode will prove rich for copper or lead; in either case, this may prove good for silver. On the silver vein, at Trevean, the shaft does not exceed 7 fathoms in depth, and the greatest length of the level is not more than 7 fathmos showing a lode from 12 to 18 in. in thickness. Along the course of the tin vein, an adit has been driven to within about 60 fms. of the silver vein, which it would cut in depth at least 40 fms. below grass. By the assay of the silver ore, it appears the minimum of the ore, selected as such, yields at least 55 ozs. to the ton, equal in value to 13*l.*; the average of the bulk is 200 ozs., equal to 50*l.* Some small portions gave at the rate of the enormous return of 9500 ozs.; but as these are only specimens, they are not criterions.

TIN VALE MINING COMPANY.

SIR,—In your last publication you gave insertion to an inferential attack on the above-named enterprise, and I, therefore, rely on your well-known impartiality to give similar circulation to this reply. All who write publicly should be very careful to confine themselves to facts, and, certainly, they who address the public anonymously should be still more cautious in their assertions. The object in view is at once frustrated, when a misstatement is detected—every remark is thereby invalidated. So must it be with your correspondent, "Looker On," who, under date of Nov. 16, from Penzance, says:—

"Sir,—Your last contained an advertisement of this mining company, which has, doubtless, with the prospective vision of past experience, well considered its own interests. There is a kind of fatality about what does not begin well; and the company will, therefore, pardon even an obstrusive hint. The dues of 1-12th appear to be excessive—1-16th, 1-18th, or 1-20th, would, perhaps, be nearer the mark."

Had "Looker On" reflected before he wrote, he would not have fallen into so unpleasant an error as to state an untruth. The prospectus, to which he alludes, very distinctly says, in the first paragraph, that "it (the mine sett) is held on lease for 21 years, from the lords of the manor, at a royalty, or due, of ONE-FIFTEENTH, and totally free from sleeping, or dead, rent;" and, five paragraphs further down, when alluding to the tin streams, it goes on to remark that "they have been secured also for the company, at the royalty, or due, of ONE-TWELFTH." The misstatement of "Looker On" is most gratuitous, for there is not the slightest possibility of confounding the two paragraphs—viz., the first and sixth in the prospectus. However, to meet "Looker On" on public grounds, I deny generally the accuracy of his statement, as to dues. The Duchy of Cornwall never grants under 1-15th; the Duke of Bedford demands 1-12th; and it is only in a few cases in the west of Cornwall, where the metal is very deep under surface, and where, consequently, expensive machinery is required, that 1-18th and 1-20th dues are allowed. In the east, the average is undeniably 1-12th to 1-15th, and amongst which is Wheal Maria at 1-12th. In Wales, the dues are frequently as high as 1-6th, and seldom lower than 1-10th.

As regards the tin streams, the dues are invariably 1-12th. Even on the Bodmin Moors, the most rough and exposed locality in the county, the royalty is not lower. The Tin Vale Mining Company, therefore, having 1-15th dues for mining, and 1-12th for streaming, has not in any way outstepped, or interfered with, the acknowledged custom of the country. "Looker On" proceeds by saying:—

"It may do for a while, and particularly whilst 'picking out the eyes' of the mine, as the works proceed; but this is not the principle of permanent mining, which, in the long run, is best for lords, adventurers, and working miners."

For the information of those unacquainted with mining phraseology, it is necessary to mention that "eyes" mean the "heart," or "substance," of the mine. The phrase in this instance is far from applicable. Tin Vale is yet in its infancy—consequently, we have not yet opened the "eyes," or reached the "heart," of the mine; which, nevertheless, will shortly, I feel assured, show "eyes" so bright, and a "heart" so strong, as to dazzle the sight, and confound the senses, of an envious "Looker On." The next paragraph in this Penzance letter is:—

"As to the rule relative to the abandonment of all claims, on relinquishing a share, this is unusual, as the retiring party generally reserves his share of the broken ores, materials, engines, &c."

In this respect I feel perfectly assured that all parties, who desire that mining should be carried on honourably, with business-like principles, will approve the determination of this company. Imagine, for instance, which is quite possible, that a share should be transferred once in each month, for 12 months consecutively, and that each of the 12 sellers should claim his month's portion of "the broken ores, materials, engines, &c." I am truly amazed that the nineteenth century can produce a person who would openly advocate this system of darkness—this germ of endless litigation, and opening for every description of fraud. It was on this very subject that a letter was written, by a gentleman of great influence, not only amongst miners, but with the public at large, who, previous to being associated with this company, said, "I consider this is very important, as I have found by experience in other undertakings, that some will not pay, and those who do, just find money for others who, if the concern goes on well and prosperously, claim a right afterwards to pay up and receive the benefit; but if, on the contrary, it turns out bad, will not pay at all, leaving those who have paid with all the loss." The clause which "Looker On" finds fault with, as being "unusual," is as follows:—"That the directors shall sell without reserve for the benefit of the company, allowing a preference to any shareholder who may wish to become a purchaser, all such shares as may be forfeited pursuant to the 5th regulation, or which may be abandoned by any shareholder, pursuant to the 25th regulation; and the proceeds of such sale shall be added to the general fund of the company; and that all such sales, and the transfers consequent thereon, shall be valid, notwithstanding the non-concurrence therein, or opposition thereto, of the former owner of, or present claimant to, such forfeited or abandoned share or shares."

The next and concluding paragraph in the letter of "Looker On" says—*"It may also be observed that, as a general principle, a large number of shares is not found to answer in the long run, except in mines paying profits—the involutions of transfer, &c., being more difficult to trace, especially when entry thereof in the cost-book is neglected. I write not this in disparagement, having no interest of any kind except as a*—LOOKER ON."

In this, I likewise disagree *in toto*. No matter what the number of shares may be, there can be no difficulty in following the "involutions" of transfers. No transfer is valid, or complete, until acknowledged by the purser, and entered in the cost-book—the transfer business, in fact, is a simple Dr. and Cr. account, which the junior clerk, in any well-regulated office, could keep with facility. I have now, Sir, gone through the whole of the letter of "Looker On," and, I hope, fully explained every point on which he has thought proper to comment. It would scarcely have been worth while to have gone so minutely into the subject had you not given so prominent a position to the communication in question—thereby inferring that in fact you, Sir, laboured under the same misapprehension as the writer. Knowing, however, that you are at all times ready to deprecate assertions at variance with facts, and desirous that all parties should have fair play, I have thus refuted the attacks of your correspondent, who, although he dates from Penzance, would, I think, find his "land mark" much nearer to the Royal Exchange, or Lombard-street, than Penzance is to the "Land's End."—A TIN VALE SHAREHOLDER: *Nov.* 23.

TIN VALE MINING COMPANY—DARTMOOR CONSOLS.

SIR,—Observing in your last week's Journal a notice of my report, and some assays of Dr. Ryan's, respecting the Dartmoor Consols Tin, &c., in which the writer draws a contrast between the richness of the ores of the Tin Vale over those of the Dartmoor Consols, I always regret to see comparisons tending to depreciate any legitimate mining, but more especially, when these comparisons are founded upon erroneous data. I have no interest in the Dartmoor Consols, further than being a well-wisher to that concern; nor did I ever have any kind of communication with Dr. Ryan. Nor have I any interest in the Tin Vale; but I do not hesitate to say, from the slight acquaintance I have with the locality of that mine, and from my having purchased a large quantity of tin from that neighbourhood, that the tin is of excellent quality.

But the error to which I allude in the Tin Vale report is this:—Dr. Ryan, if I do not mistake, had specimens of the lode sent him—"stones" of tin ore, containing all the constituent qualities of the lode, and not samples of the pulverized clean tin ore, and it was from them that his analysis was given.

Before concluding, I have no hesitation in saying, I believe the Dartmoor Consols to be an excellent mine; and that it will give good profits if rightly conducted; nor need the outlay be very great to do this.

Tavistock, Nov. 24. JOHN PAUL, Mining Engineer.

P.S.—The produce of the ore from the Dartmoor Consols Mine is from 65 to 70 per cent. of metal.

TIN VALE MINING COMPANY.

SIR,—I observed, in last week's *Mining Journal*, a letter respecting this mine, written by "A Looker On" in the far west—a very appropriate place it is for him. He states that the dues in the above mine are 1-12th, which are excessive; and that 1-16th, 1-18th, or 1-20th would be nearer the mark. I regret much that the question of dues in the mining districts of this country are not taken up and settled. They vary considerably; and, in some parts—for instance, Ireland, in particular—a rent charge is taken instead of dues. At the Wheal Maria, and other mines in that district, the dues are 1-12th. The Duchy invariably grants at 1-15th; but, in the case of stream works, I believe, without a single exception, the dues are 1-12th—in fact, from the inquiries I have made among the streamers, in the different parts of the county, these have invariably been the dues payable. On referring to the prospectus of Tin Vale, the dues are 1-15th, and not 1-12th, as stated by "A Looker On;" and, on inquiry in that district, it will be found that those are the customary dues; and I believe there is not a single instance of mining setts in that part having been granted with dues below 1-15th. I am aware that, in some instances, down west, Lady Basset, Wm. Pendarvies, and a few others, have granted at 1-18th to 1-20th. Tin Vale Mine is situate on the Bodmin Moors, celebrated from the Great Rough Tor Mine. This district is perfectly new, and until the last few years, scarcely known, although no district in the county shows finer appearances on the surface of making a large quantity of mineral in depth. The mines are chiefly the Great Wheal Rough Tor, Great Wheal Michell, Wheal Coad, Tin Vale, and others. I will, at a future day, trouble you with further remarks upon this district, embracing its geological features, and an account of its mines. I perceive that "Looker On" alludes to the "picking out the eyes" as not permanent mining. He is perfectly right as regards this fact; but how he can for a moment apply it to Tin Vale, I cannot conceive, as this is a mine in its infancy, and whose eyes have yet to be *discovered*. I only, a few weeks since, made a most minute survey of this property, in conjunction with other mines in this district; and I have no question of doubt that it will be a most profitable adventure, and reward the parties embarking in it with ample dividends—not only from the returns of tin, but also copper, as there are some splendid lodes of this metal in the sett. With respect to the number of shares, that depends entirely on the parties embarking their capital; in Cornwall, it is the custom to have a small number; but London adventurers prefer a large number. If the purser neglects to keep the cost-book in a proper manner, he and the directors are to blame for not having an efficient person to manage the affairs of the company. The rule referred to, as regards abandoning, only relates to the mines being discontinued; then every shareholder has an interest in the materials, provided their calls are paid-up at the time of the abandoning of the mine, and after the debts of the company are satisfied; but, in case of notice to the purser of giving up the shares, previous to the abandoning of the mine, I take it, that the shareholder so giving the notice, can have no further claim upon the materials or the mine.

Shaldon, Nov. 24. DEVONIA.

WHEAL ANDREW AND NANGILES MINING COMPANY.

SIR,—I beg the favour of your inserting in the next Number of the *Mining Journal*, the accompanying resolutions of Wheal Andrew and Nangiles adventurers, passed at their account-meeting last Monday, together with the names attached to them. Not a word of complaint as to the working of the mines, or the inefficiency of the agents, has ever reached me, or been uttered at any of the meetings.

I would remark, that the parties to the resolutions (holding together 149 shares) are all resident in the neighbourhood of the mines, and, with most of the remaining Cornish shareholders, usually attend the account-meetings, and signify their approval of the proceedings, by signing the accounts and resolutions that are submitted to them.

It is to be hoped, that "An Adventurer," in any letters he may again address to you, in reference to the mines in question, will learn, from the manner in which he has now been replied to, the necessity of having some respect for truth, in making his statements.

It is a matter of perfect indifference to the shareholders in Wheal Andrew and Nangiles, who may be the writer of the letters to which you have referred; but I would suggest for your consideration, whether or no a person who has so grossly imposed on yourself, and who has attempted to inflict a serious injury on the character and reputation of the underground agents employed in these mines, ought not to be unmasked, by having his name handed to the shareholders; and I confidently hope you will see, by adopting this course, that great injustice to many honest men may be prevented. WM. FRANCIS.

Whitehall, Nov. 18.

"A paragraph in the *Mining Journal* of the 13th inst., was read to the meeting, in which it was alleged, that "An Adventurer" had made complaints to the shareholders respecting the inefficiency of the underground agents, and stating, that the mines were managed solely by Captain Francis; and that the meetings held on the mine, generally consisted of only about one-third of the adventurers, and that the shareholders in question had made several appeals in vain, as to the course of which he complained.

"On the motion of Mr. Stokes, seconded by R. Barclay Fox, Esq., it was

"Resolved,—That the complaints referred to in the *Mining Journal* are considered by this meeting to be false and unfair. The shares held in London, instead of a majority, being only 25-235ths, and the management of the mines being by experienced agents, in whom the shareholders have the utmost confidence; whilst the accounts and affairs of the mines are controlled by the majority of shareholders, meeting at the mines at regular intervals of two months, according to the Cost-book Principle.

"Resolved,—That the purser be requested to communicate the foregoing resolution to the Editor of the *Mining Journal*, and to inform him, that no complaint respecting the management of the mines has been made by any adventurer, either to the adventurers or to the purser, or agents of the mines, at their meetings, or at any other time.

(Signed) "R. Barclay Fox; John Paddon; Baynard and Sons; for James Harvey—B. Matthews; H. Sewell Stokes; for Samuel Dunstan and Thomas Craig—Elias Dunsterville; William Richards, jun.; for John Simmons—John Dyer; William Francis; James Sims; William Sims; John Paddon, jun.; Charles Clift; W. H. Paddon; Thomas Nicoll, jun.; Henry Francis; Francis Pryor; Thomas Dunstan; Samuel J. Bassett; Thos. J. T. Corfield; Nicholas Trevena; Elias Dunsterville; for John Michell and Co.—Henry Michell; James Gatley; John Gatley: Henry Andrew; William Rowe; Nicholas Gill; James R. Netherton: Henry Inow; J. White; B. C. Rowe.

Wheal Andrew and Nangiles, November 15.

PLYMOUTH WHEAL YEOLAND.

SIR,—If Capt. R. Edwards were directed periodically to remit to your valuable Journal "*a full, true, and particular account*" of the position and prospects of this undertaking, "A Shareholder" would not have to mourn the fact, that these shares are selling at less than one-half their value. This mine has, perhaps, excited more interest than any other in the locality, from the following causes:—1st, the south lode cut rich about 9 feet under the surface, and increased in value for 18½ fms., when the operations were suspended, in consequence of the want of machinery to keep the water—the average value of the lode per fathom was from 70*l.* to 80*l.*, and at least 800*l.* worth of tin has been taken out of this shaft; 2d, in sinking the "bob pit" from 200*l.* to 300*l.* worth of tin was discovered; and 3d, in consequence of this discovery, the talented manager of the works (having, from calculations, satisfied himself that it was the cheaper mode), commenced an open cutting "*after the manner of the ancients*," which extends now more than 15 fms. in length, and averages in value from 60*l.* to 70*l.* per fathom. But, Sir, I must not further trespass, my object being to engraft on the letter of "A Shareholder," the suggestion that distant shareholders should, by some means, be supplied with such information "on authority," as would prevent their throwing away so valuable a property as shares in Plymouth Wheal Yeoland.—ANOTHER SHAREHOLDER: *Nov.* 23.

WHEAL BARBARA AND CASCADE MINES.

SIR,—It was with some surprise that I perused, in your paper of the 20th inst., a letter from a Mr. Heinrich Fischer, of 7, Lincoln's-Inn-Fields, having reference to the quotations of the prices of shares in the above mines. It is not my duty to interfere with respect to prices, but simply to state, that your correspondent is not a holder of shares in either of the undertakings; and, therefore, possessing no title, it can very well be imagined, that no transaction, by way of transfer, could take place. What the motive was, which actuated your correspondent in addressing you, I am at a loss to conceive; but have deemed it due to yourself, and to the offices with which I am connected, thus to disabuse your mind, and that of your readers. N. TRUSCOTT.

British Mining Offices, 41, *Moorgate-street, Nov.* 25. Purser of the above Mines.

PRODUCE OF THE RUSSIAN GOLD MINES.—According to the official returns of the Russian Government, the total quantity of gold extracted from the Ural and Siberian Mines, in the year 1846, was 1722 poods, 29 pounds (Russian), and 87 zolotnicks—or say, in Russian pounds, 68,910; in pounds avoirdupoise, about 62,120. The value may be approximately stated in pounds sterling at about 3,630,000*l.* As the gold is not all of equal purity, and, on refining at the Mint, must, therefore, lose something by waste, this estimate, founded on weight alone, may be subject to some deduction. The produce of the same mines, in 1845, was 1386 poods, 6 pounds, and 41 zolotnicks—difference in excess for 1846, 336 poods, 23 pounds Russian, or (say) about one-fifth more. The aggregate results of mining operations, for the first half of the present year, have not yet appeared; but we have the returns for the Ural Mines, both those worked on individual account and appertaining to the Crown, for the first six months of the present year. The total yield, including a small quantity of platina, silver, and irridium, alloyed with osmium, was in gold 162 poods, 14 pounds, 22 zolotnicks, or (say) in sterling value about 350,000*l.* This quantity shows a small falling off, as compared with last year, for the same period. The yield of the Ural Mines then was 165 poods, 31 pounds, 87½ zolotnicks.

RAILWAY SCHEMES FOR THE PRESENT SESSION.—There are 140 notices of application of railway bills, of which 37 are for bills suspended last session with the understanding that they should commence this session at the same stage in which they were suspended. Thirteen of them were read a second time in the House of Lords, and will require, in capital and loan, 4,982,200*l.* for the construction of 165 miles of railway. The 24 remaining bills were suspended in the House of Commons, the merits of 21 of them having been reported to the House; these will require, in capital and loan, 9,537,800*l.* for 382 miles of railway. The aggregate sum required for the suspended bills, therefore, will amount to 14,520,000. The total length of railway proposed to be constructed for that sum is 547 miles. There are 103 notices for new bills, of which eight are for new railways, 24 for new branches, 22 for the extension of time for the purchasing of land and for the completion of works, 27 to raise additional capital, 25 for leases and amalgamations, 20 for deviations in lines already authorised, and four for dissolution.

RAILWAY EXPRESSES.—As we think the manner in which the express of Wednesday was worked reflects the greatest credit on the managers of the London and North-Western, the Lancaster and Carlisle, and Caledonian Companies, we have much pleasure in handing you a memorandum of the time, as it was kept by our Mr. Wm. Smith, who went through with the express.—W. H. SMITH & SON: *Strand, November* 26:—

We left London with the morning papers, on Wednesday, at 5 h. 3 m. A.M.: arrived at Rugby (83 miles) at 7 h. 30 m.; left Rugby, 7 h. 40 m.; arrived at Stafford (132 miles), 8 h. 50 m.; arrived at Crewe (157 miles), 9 h. 20 m.; special engine from Crewe arrived at Manchester (188 miles), 10 h.; left Crewe, 9 h. 25 m.; arrived at Warrington (181 miles), 9 h. 55 m.; special engine from Warrington arrived at Liverpool (201 miles), 10 h. 30 m.; left Warrington, 10 h.; arrived at Preston (201 miles), 10 h. 35 m.; left Preston, 10 h. 42 m.; arrived at Kendal (251 miles), 11 h. 40 m.; arrived at Carlisle (299 miles), 1 h. 6 m. P.M.; left Carlisle, 1 h. 13 m.; arrived at Beattock (339 miles), 2 h. 15 m.; left Beattock, 2 h. 18 m.; arrived at Glasgow, by post-horses (398 miles), 8h. Stopped at Tring, Wolverton, Tamworth, Stafford, Crewe, Wigan, Lancaster, and Kendal for water; changed engines at Rugby, Warrington, Preston, and Carlisle. Mr. Worthington drove from Lancaster to Carlisle, and Mr. Addison from Carlisle to Beattock.

[Mr. Smith arrived in town on Thursday night, having travelled the entire distance from London to Glasgow and Edinburgh, and back (upwards of 900 miles), in 40 hours—*nine of which were spent in Edinburgh and Glasgow!*]

PARLIAMENT AND THE RAILWAYS.—The Government measure of last night proposes to extend the time for the purchase of land and the completion of lines already sanctioned, and to leave the commencement of new works at the discretion of the shareholders. The Chancellor insisted too much on the fact, that railway expenditure was one of the causes of the present distress. Mr. Hudson assented to the Ministerial measure, as one tending to reassure the timid public.

CALEDONIAN RAILWAY.—Arrangements are in progress to open this line, from Beattock to Edinburgh, on the 20th December, which will complete the through communication between Edinburgh and London *via* Carlisle. The branch to Glasgow will probably be opened for public traffic at the same time. On this line, London time has, by order of the Post-office, been adopted. It is 12 min. in advance of Edinburgh and Carlisle, and 17 of Glasgow.

DUNSTABLE RAILWAY.—The Government inspector has just reported on the fitness of this line for public traffic; but, owing to the numerous alterations which the opening of the Trent Valley renders necessary in the entire working of the North-Western system, the Dunstable line is not likely to be publicly opened until January. It is a short line of seven miles, diverges out of the main route at Leighton, a distance of 40 miles, and has cost 130,000*l.* There is no engineering of difficulty, the steepest gradient being 1 in 173. The estimated net profit on the probable traffic is about 2500*l.* per annum, or equal to 5 per cent.

Some years since, the Liverpool and Manchester Railway Company burnt from 50 to 60 lbs. of coke per mile; they have since reduced it, by improvements and inventions, to about 16 or 18 lbs.

THE LATE ATTEMPT TO OVERTURN A RAILWAY TRAIN.—It will no doubt be in the recollection of our readers, that William Ashcroft was convicted at the last Central Criminal Court sessions for having, on the 25th of last month, placed large blocks of granite upon the rails on the Eastern Counties Railway, near Lee-bridge station, just before a down train was due. The passengers were so much pleased with the presence of mind and judgment displayed by the engine-driver, William Young, in stopping the train, and by the subsequent exertions of the fireman and guards in capturing Ashcroft, that they raised a subscription, amounting to 8*l.* 8*s.* 6*d.*, and requested the directors to divide it in such proportions as they might think fit. The money was accompanied by a very flattering letter, in praise, not only of the men, but of the improved, and now efficient, general management of the line. The men attended the board on Thursday last, when, after a suitable address from Mr. Waddington, the chairman on that day, Young was presented with 5*l.*, being the directors' addition to the subscription, and the 8*l.* 8*s.* 6*d.* was divided equally among the three other men. It may, perhaps, be mentioned, that Young was the man selected by the directors to drive the train that conveyed her Majesty and Prince Albert to and from the Cambridge Installation, in July last. He is one of the oldest engine-drivers in the Eastern Counties' service, and one of their most valuable servants.

NEW GAS ENGINE.—An engine, on a new principle, has been invented by a Mr. Perry, of Herkiman, and is now in operation at the store of Mr. Samuel Perry, in Front-street, near Whitehall, and evinces an astonishing power in proportion to the minute quantity of material from which the power is produced. The machinery consists, in part, of a cylinder, piston, pitman, flywheel, and governor; in this respect similar to a steam-engine. A small quantity of spirits of turpentine is kept in a warm state, and the vapour arising therefrom is mixed with 50 times its volume of atmospheric air. A small quantity of this hydrogenated air is drawn into the cylinder and ignited by a movement of the machinery, producing a slight explosion, whereby the remaining air—at least 9-10ths of the whole—becomes so heated that it drives forward the piston with great force by its expansion. This engine is said to be capable of working 10-horse power; and it is intended to substitute rosin instead of turpentine, which will reduce the expense of feeding it to about 50 cents. per day. —*New York Journal.*

THE IRON TRADE.—We are sorry to learn, that the Brunswick Iron-works, at Wednesbury, conducted by the Patent Axletree Company, have curtailed their operations, and reduced their workmen to half time. This resolution has been arrived at from purely prudential motives; and, in mentioning the fact, we are anxious to guard against the slightest reflection upon the prosperity of the company. The price of iron may be considered as slightly on the decline, and much anxiety is felt with reference to the course which Government may take in connection with railways, respecting which the Chancellor of the Exchequer has given notice of a motion.—*Birmingham Advertiser.*

EXPORTATION OF THE PRECIOUS METALS.—The following are the official returns of the exports of gold and silver from the port of London for the last week:—

Silver bars to Hamburgh	49,600 ounces.
Gold dust to ditto	120 "

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending Nov. 20, was 17,307; amount of money, £72 2*s.* 3*d.*

MEETINGS OF PUBLIC COMPANIES DURING THE WEEK.

THIS DAY ....West Wheal Maria Mining Company—Bedford Hotel, Tavistock, Twelve.
TUESDAY.....Hungerford Market Company—offices, at One.
Waterman's Steam-Packet Company—London Coffee-house, at Eleven.
WEDNESDAY...Regent's Canal Company—offices, at One.
THURSDAY.....Wheal Robins Mining Company—Fountain Inn, Liskeard, at Three.
Waterloo Bridge Company—Crown and Anchor Tavern, Strand, at One.
Mines Royal and Mineral Battery Works Company—at Twelve.
Swansea Dock Company—offices, Swansea, at Two.
FRIDAY.....Wheal Trevena Mining Company—Fountain Inn, Liskeard, at Two.
SATURDAY.....Windsor, Staines, and South-Western Railway—Nine Elms Station, One

[The meetings of Mining Companies are inserted among the Mining Intelligence.]

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Eleven o'clock.

Bank Stock, 9 per Cent., 187 9
3 per Cent. Reduced Ann., 83¾ ⅞
3 per Cent. Consols Ann., 85 ¼
3 per Cent. Annuities, —
3½ per Cent. Ann., 85¼ 4¼
Long Annuities, 8⅞
India Stock, 10½ per Cent., 25 dis.
3 per Cent. Consols for Acct., 84¼ 5½
Exchequer Bills, 1000*l.* 3d., 2 dis. par
Belgian Bonds, 4½ per Cent., 90
Dutch, 2½ per Cent., 54¼
Brazilian, 5 per Cents., 78½ 8
Chilian, 6 per Cents., 90
Mexican, 5 per Cents., 16
Spanish, 5 per Cents., 17⅝ ¼
Ditto 3 per Cents., 29
Portuguese, 5 per Cents., 77
Russian, 5 per Cents., 106 ⅞ ½

MINES.—The transactions of the week have not been so many as we anticipated would have followed the business done during the past fortnight. Notwithstanding, we find that a fair proportion of shares have been sold in some of our leading mines, and negociations are going on for others. As confidence becomes restored, we have no doubt that the share market will be less restricted, and the improvement in Consols will also have a considerable tendency to direct capitalists to these investments. The union of these important objects are looked for with much solicitude, although we do not contemplate its completion before the commencement of 1848—still we fully hope to see the mining interests of Britain in a far more permanent position than we have hitherto known it.

In more fully pursuingthe mineral resources of Great Britain—in opening the metalliferous districts of Scotland, Ireland, and Wales—we should be throwing open a wide field of employment for the thousands of labourers, whose work has been so suddenly checked by the suspension of railway operations.

Adverting to the above portions of the British Empire, we may be allowed a passing observation, by remarking, that Scotland has of late invited a development of some of her lodes; and, by the very partial operations commenced, we have every reason to calculate on their being found highly productive. Ireland's mines are well known to contain some of the richest ores in the kingdom; whilst Wales returns nearly three-fourths of the lead raised. We, therefore, hope, before long, to see practical mining extended to these portions of the kingdom, its mineral geology more fully developed, the industrial part of the community permanently employed, and the expenditure of capital adequately remunerated.

We stated last week, in reference to the Devon Great Consols Mine, that "the funds now in hand, including Exchequer Bills, copper bills due and coming due, may be estimated at 21,000*l.*," it should have been "27,000*l.*"—the error being in composing. The dividend of 5*l.* per share was paid yesterday. We omitted referring to Consols account meeting, held on the 17th, when a dividend of 5*l.* per 100th share was declared, reserving a balance of 1866*l.* in the purser's hands.

A dividend of 4*l.* 10s. per share has been paid on Treviskey, and 1*l.* per share on Barrier; this is less than was anticipated, but we perceive the cost for the two months amounted to 1434*l.* 14s. 9d.—a much larger sum than in any previous two months. In making up the Treviskey and Barrier accounts, it will be observed, the cost is charged to the month of September; whilst credit is only given for the ores sold in July. Instead, therefore, of the balance in hand being 11*l.* 9s., the ores sold on the 23d of Sept. last, in Treviskey (which is now cash in hand), amounts to 2275*l.* 19s. 6d., and in Barrier, 1504*l.* 17s.; besides this, 364 tons for Treviskey, and 72 tons for Barrier, were sampled on the 10th inst. The Trelawney accounts show a profit in the two months' working of 703*l.*

We learn, that a deputation from the London shareholders, in West Wheal Maria, have gone to the mine, for the purpose of discharging the liabilities, and placing the management on a more permanent and satisfactory basis. The discoveries recently made in Wheal Williams, and the local position of the mine, fully warrants this important step; and, from the well known activity of the gentlemen deputed, we have every reason to believe that the mine will be worked with more energy, and we hope will be ultimately found a good and standing property.

We have found an inquiry for Carwinning Hill shares (a new Scotch mine), and been informed, that a large number has been sold this week.

We referred to Trevean Mine, a few weeks since, in consequence of the discovery made, as to the value of its gossan—a brief notice of the mine will be found in another column.

The following shares have been sold this week—viz.: East Wheal Rose, Devon Great Consols, Treviskey and Barrier, Bedford United, Condurrow, Trelawney, Trahane, Trevean, Tavy Consols, South Basset, South Wheal Tolgus, West Seton, Mary Ann, Herodsfoot, Wheal Williams, Gwinear, West Providence, Caradon Wheal Hooper, Grambler and St. Aubyn, Wheal Coad, West Wheal Maria, Andrew and Nangiles, &c.

The business transacted in foreign mines appears to have been very limited—a few Imperial Brazilians and Australians may be considered the extent of business done.

Dispatches have been received from the mines by the directors of the National Brazilian, Imperial Brazilian, St. John del Rey, &c.—copies of reports appear in another column.

HULL, THURSDAY.—As we have ventured to anticipate in our report of last week, and previously, the market is decidedly stronger, with an upward tendency. In such states of the market, however, *rumours* of various kinds are apt to gain currency, which, in duller times, would pass unheeded. Holders and buyers of stock—the latter especially—cannot be too careful how they give credence to these. The proposed Government measure as to railways, seems to be a good and reasonable one, in its general scope and tendency, and, we have no doubt, will be productive of much benefit.

RAILWAY TRAFFIC RETURNS.

Name of Railway.	Lgth. Rway.	Present actual cost.	Price per share	Last Div.	*Traffic Returns.* 1847	1846
Arbroath and Forfar	15	£179,939	26	4p.c.	£169	203
Chester and Birkenhead	15	706,793	38	—	619	517
Dublin and Drogheda	35	733,655	54	3½	717	707
Dublin and Kingstown	7½	473,282	—	7	684	632
Dundee, Perth, and Aberdeen	36½	285,745	35	6	695	286
East Lancashire	24	1,307,490	21½	—	857	616
Eastern Counties	202½	7,698,370	16½	5	10391	8052
Eastern Union	43½	979,926	60	—	1102	408
Edinburgh and Glasgow	50	2,375,745	48	6	3383	3837
Edinburgh and Northern	29	953,207	16½	—	614	—
Glasgow, Paisley, and Ayr	60½	1,890,547	121	7	2433	2154
Glasgow, Paisley, & Greenock	23	838,964	18½	3	1003	940
Gt. Southern & Western, Ireland	110½	1,876,326	23	—	1820	955
Great Western	240½	10,630,763	101	8	16808	16704
Kendal and Windermere	10½	147,001	23	—	90	—
Lancaster and Carlisle	70	1,291,913	51	—	1364	—
Lancashire and Yorkshire	92½	6,807,314	74½	7	8610	8682
London and North Western	428	20,010,467	155	9	38209	36221
London and Blackwall	4	1,146,289	5¼	¾	655	793
London, Brighton, & South Coast	147	5,659,180	44½	4	7469	7026
London and South-Western	186	5,836,135	55½	9	7150	6042
Londonderry and Enniskillen	14½	160,018	24½	—	—	—
Manchester, Sheffield, & Lincolnsh.	49½	2,078,135	80	5	2106	1887
Maryport and Carlisle	28	424,417	—	3	621	517
Midland Company	382	8,658,604	110	7	18489	16793
Midland Great Western (Irish)	26½	583,776	—	—	841	—
Newcastle and Carlisle	65	1,184,080	117	6	2015	2335
Norfolk	70½	1,375,633	83	6	1959	1555
North British	78	2,514,150	27½	5	2065	1120
Shrewsbury and Chester	17	591,158	21½	—	515	231
South Devon	29	1,339,860	23	—	704	310
South-Eastern	157½	6,398,218	30	6	7820	7141
Taff Vale	38	785,607	—	5½	1822	1036
Ulster	25	646,211	52	6	739	776
Whitehaven Junction	12	130,000	—	4½	224	—
York, Newcastle, & Berwick	236½	3,685,102	33½	9	10924	7340
York and North Midland	196	3,196,869	76	10	7142	6236
FOREIGN RAILWAYS.						
Amiens to Abbeville	28	373,338	—	4	365	—
Antwerp to Ghant (three weeks)	31	——	—	—	1313	—
Belgian	—	——	—	—	64135	60676
Dutch Rhenish	57½	——	2½	—	938	934
Northern of France	211	2,000,000	12½	4	13838	8167
Orleans to Bourges (Central)	70	——	—	—	3505	—
Orleans to Tours	72	600,000	—	5	3770	—
Paris and Orleans	82	2,011,720	44	12½	8300	—
Paris and Rouen	85	2,082,916	35½	9½	6860	5904
Rouen and Havre	59½	——	19½	4	3745	—
Strasburgh and Basle (monthly)	98	——	8	1½	9080	10227
West Flanders ..... (ditto)	—	——	1	—	1615	—

Total earnings for last week, £162,983, being an increase of £20,804 over last year.

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwessin	7 ..	—
512	Albert Consols	1 ..	2½
1024	Alfred Consols	4½ ..	30
256	Alternam Consols	2 ..	15
235	Andrew and Nangiles	28½ ..	11½
10000	Ayrshire Iron Company	5 ..	3½
1624	Balleswidden	9 ..	18
128	Balnoon Consols	25 ..	25
10000	Banwen Iron Co.	2 ..	—
1000	Barristown	4½ ..	10
4000	Bedford	2½ ..	4
128	Besore Lead Mine	14 ..	10
315	Birch Tor Tin Mine	24½ ..	—
8000	Blaenavon	50 ..	20
100	Botallack	175 ..	60
120	Brewer	5 ..	7
10000	British Iron, New, regis.	10 ..	10
—	Ditto ditto, scrip	10 ..	12
128	Budnick Consols	52½ ..	40
128	Burthy	20 ..	21
100	Bwich Cwmerfin	20 ..	—
128	Callestock	17 ..	30
1000	Callington	19 ..	30
20000	Cameron's Steam Coal	4 ..	3½–¾
256	Caradon Copper Mine	9½ ..	1
256	Caradon Mines	22½ ..	17
256	[illegible] United	24 ..	5
256	[illegible] Wh. Hooper	21 ..	10
100	[illegible]rea	15 ..	102½
2048	Cascas	1 ..	2
112	Charlestown	200 ..	30
166	Cleveland	9 ..	5
512	Coatlithe Hill	½ ..	2
1900	Combmartin	7½ ..	3
500	Combiswn	½ ..	6
128	Comfort	45 ..	100
256	Condurrow	20 ..	35
3560	Cook's Kitchen	14 ..	2
2048	Coombe Tin Mine	4½ ..	2
1000	Coombe Valley Quarry	1½ ..	2
1000	Copper Bottom	1 ..	1
1024	Cosheen	4½ ..	20
240	Craddock Moor	15½ ..	15
128	Creeg Braws	120 ..	100
500	Cubert Mine	12½ ..	15
2048	Dartmoor Consols	2 ..	2
7500	Demelza Mines	2 ..	2
1000	Derwent	8½ ..	5
1024	Devon&CourteenayCon.	7½ ..	2
1024	Devon Great Consols	1 ..	200–250
1000	Dhurede	2 ..	5
186	Dolcoath	30 ..	50
2560	Drake Walls	4 ..	4
10000	Durham County Coal	45 ..	9
3000	Dyfngwm	10 ..	12½
256	East Alvereney	12½ ..	35
112	East Caradon	42 ..	42
2048	East Crowndale	4½ ..	3½
512	East Combe Silver-Lead	6½ ..	6½
128	East Pool	5 ..	40
100	East Relistian	22 ..	40
9000	East Tamar Consols	1½ ..	2
—	East Wheal Albert	1 ..	3
94	East Wheal Crofty	280 ..	125
256	East Wheal Fortune	2 ..	3
128	East Wheal Rose	50 ..	1300
2048	East Wh. Rough Tor	½ ..	2
—	East of Scotland Iron Co.	2½ ..	1
123	East Wheal Seton	14 ..	15
256	Elborough	1½ ..	2
256	Exmoor Wh. Eliza	3½ ..	6
512	Fowey Consols	40 ..	45
6400	Gadair	2 ..	2
20000	Galvanised Iron Co.	10 ..	9½
10000	Gen. Mining Co. for Irel.	2 ..	1½
2048	Georgia Tin Mines	1½ ..	1½
256	Gonamena	31½ ..	45
128	Goonvrea	4 ..	1½
244	Grambler & St. Aubyn	— ..	12
100	Great Consols	1000 ..	400
256	Great Callestick Moors	22 ..	25
2560	Great Michell Consols	1½ ..	4
256	Great Resugga Moor	7 ..	10
512	Gt. Wh. Rough Tor Con.	13½ ..	25
100	Grogwinion	5 ..	—
256	Gwinear Consols	7 ..	20
1000	Harrowbarrow Old Mine	8½ ..	2
6000	Heigneton Down Con.	2 ..	2½
256	Herodscombe	4½ ..	5
256	Herodsfoot	16 ..	19
10000	Hibernian	12½ ..	1⅞
239	Hobu's Hill	6 ..	3
1000	Holmbush	19 ..	12
827	Kirkcudbrightshire	5½ ..	6
2048	Lamberooe Wh. Maria	11 ..	3
128	Lelant Consols	90 ..	60
160	Levant	— ..	90
1000	Lewis	15 ..	6½
1000	Llwyn Malees	5 ..	—
3600	Llynvi Iron	50 ..	50
256	Lostwithiel Consols	15 ..	15
6000	Marke Valley	10 ..	3
5000	Mendip Hills	2½ ..	1½
5000	Merionethshire Slate & Slate Slab Co.	1½ ..	2⅝–2¾
1000	Mining Co. of Ireland	7 ..	6½
256	New East Crowndale	3½ ..	3½
128	North Fowey Consols	30 ..	30
100	North Pool	45 ..	370
70	North Roskear	10½ ..	350
512	North Treburget	2 ..	3
256	North Wh. Abraham	1 ..	1
262	North Wh. Leisure	1½ ..	2
128	North Wh. Providence	2½ ..	3
10000	Northern Coal Co.	23 ..	2
1200	Old Delabole Slate Co.	25 ..	35
128	Par Consols	900 ..	1000
4000	Pennant	1½ ..	2
100	Penrhiw	30 ..	65
7380	Perran St. George Un.	13 ..	20
128	Perran Wh. Virgin	9½ ..	15
512	Plymouth Wh. Yeoland	4½ ..	20
256	Polsalth Consols	4½ ..	7
112	Providence Mines	35 ..	45
10000	Rhymney Iron	50 ..	20
10000	Ditto New	7 ..	6½
256	Rose Consols	10 ..	2
1000	Rosewall Hill	1 ..	5
256	Rosewarva Mines	— ..	12
—	Shotts Iron Company	50 ..	60
2500	Silver Valley	5 ..	2
1024	South Callington	5 ..	5–6
128	South Caradon	10 ..	450

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price.
1100	South Dolcoath	3 ..	2½
256	Sth. Friendsh. Wh. Ann	16 ..	25
300	South Harvannah	10 ..	25
9000	South Tamar	¼ ..	¼
256	South Tolgus	7½ ..	40
256	South Trelawney	20 ..	8½
128	South Yeoland	16½ ..	20
128	South Wheal Basset	110 ..	80
124	South Wh. Francis	160 ..	200
256	South Wh. Hope	— ..	5
1000	South Wh. Maria	2½ ..	2
256	South Wheal Rose	11½ ..	1
256	South Wh. Sophia	4 ..	4½
10000	Southern&Western, Irish	2 ..	4
280	Spearne Moor	30 ..	40
256	St. Austell Consols	9 ..	10
94	St. Ives Consols	— ..	320
128	St. Michael Penkivel	5 ..	10½
1000	Stray Park	43 ..	23
9600	Tamar Consols	3 ..	4
1024	Tavy Consols	4 ..	5–6
6000	Tincroft	7 ..	8
1000	Tin Vale	2 ..	2
128	Tokenbury	142½ ..	10
256	Trehane	2 ..	27
5000	Treleigh Consols	6 ..	3½
2000	Trenance	2 ..	50
96	Treavean	10 ..	250
120	Trethellan	5 ..	16
120	Treviskey and Barrier	130 ..	145
288	Trevean	1½ ..	30
128	Trewellard	12 ..	26½
100	United Mines	300 ..	350
256	Wellington Mines	15 ..	30
128	West Basset	45 ..	30
256	West Caradon	20 ..	140
128	West Cargoll	2 ..	12
512	West Fowey Consols	40 ..	15
256	West Providence	9 ..	20
200	West Seton	40 ..	135
—	West of Scotland Iron Co.	210 ..	210
120	West Trethellan	5 ..	35
256	West United Hills	6½ ..	1
256	West Wh. Friendship	8 ..	10
3845	West Wheal Jewel	11 ..	1½
2360	West Wh. Maria	2½ ..	1½
2560	West Wheal Rough Tor	¼ ..	2
256	West Wheal Shepherd	5 ..	2½
256	West Wheal Tolgus	21½ ..	5
256	West Wheal Treasury	10 ..	10
5200	Wicklow Copper	5 ..	10½–¾
184	Wheal Adams	51 ..	10
1000	Wheal Agar	— ..	10
256	Wheal Albert	10 ..	8
128	Wheal Acland	13 ..	2
256	Wheal Allen	2 ..	5
237	Wheal Anderton	18 ..	25
128	Wheal Ann	— ..	50½
512	Wheal Ann, Bridford	1 ..	2
512	Wheal Anna Maria	— ..	5
128	Wheal Arrose	5½ ..	5
1024	Wheal Ash	3 ..	12
120	Wheal Bal	5½ ..	20
2560	Wheal Barbara	1½ ..	4–5
256	Wheal Benny	8½ ..	5
256	Wheal Blencowe	8 ..	5
256	Wheal Bucketts	20 ..	5
256	Wheal Calstock	3 ..	4
136	Wheal Clifford	190 ..	190
1024	Wheal Coad	½ ..	1–1½
128	Wheal Courtenay	— ..	20
6000	Wheal Curtis	2½ ..	3–3½
256	Wheal Dyke	12 ..	13
256	Wheal Fortescue	6½ ..	8
512	Wheal Fortune Consols	3½ ..	6½
2048	Wheal Frederick	2 ..	2
388	Wheal Franco	27 ..	30
128	Wheal Harriet	45 ..	50
256	Wheal Jane	21 ..	15
256	Wheal Louisa	8½ ..	8
112	Wheal Margaret	79 ..	250
256	Wheal Maria (Hayle)	24 ..	2
4000	Wheal Martha Consols	5 ..	—
512	Wheal Mary Ann	5 ..	16
256	Wheal Mary Consols	38 ..	25
210	Wheal Prospect	4 ..	7
120	Wheal Reeth	27 ..	80
128	Wheal Rose	60 ..	45
2048	Wheal Samson	— ..	20
99	Wheal Seton	214 ..	1100
256	Wheal Sisters	29½ ..	20
256	Wheal Sophia	5 ..	10
128	Wheal Spearne	10 ..	75
128	Wheal St. Ann	9 ..	15
260	Wheal Trelawney	7½ ..	95
256	Wh. Tremaine(St. Ervan)	4½ ..	20
258	Wheal Tremayne	35 ..	25
128	Wheal Trew	20 ..	21
256	Wheal Trevenna	3 ..	4
92	Wheal Tryphena	140 ..	265
128	Wheal Venland	13½ ..	4
256	Wheal Vlow (Perranz.)	⅛ ..	⅛
184	Wheal Vyvyan	— ..	60
256	Wheal Williams	6 ..	20

FOREIGN MINES.

Shares.	Company.	Paid.	Price.
5000	Alten Mining Company	14½ ..	2½
15000	Asturian Mining Co.	11 ..	5½
20000	Australian	2 ..	2½
10000	Anglo-Mexican Co.	100 ..	2
12374	Ditto Subscription	25 ..	2½
3000	Bolanos	150 ..	3½
2000	Ditto Scrip	15 ..	3½
12000	Brazilian Imperial	23 ..	7½
10000	Cobre Copper Co.	40 ..	16
8500	Columbian Co. regis.	55 }	1
8000	Ditto Scrip	5½ }	
5000	Copiapo Mining Co.	14 ..	2½
10000	General Mining Ass'n.	20 ..	14
5000	Kinzigthal Mining Ass.	2 ..	2½
20051	Mexican Company	59 ..	—
2000	Mexican & SouthAmer.	7 ..	1½
5000	Mocaubas & Cocaes	25 ..	6–6½
29320	Rl. del Monte, regis. } Ditto unregistered }	28½ ..	1½
	Ditto Red Debentures	— ..	10
	Ditto Black ditto	— ..	8
	Ditto Loan Notes	150 ..	60
7000	Royal Santiago	10 ..	6
2000	Pachuca Mines	4 ..	4½
11000	St. John del Rey	15 ..	6
43174	United Mexican	28½ ..	1⅛

JOINT-STOCK BANKS.

Shares.	Companies.	Paid.	Div. p. cent.	Price.
22,500	Australasia	£40	£3	£15½
20,000	British North American	50	5	44½
20,000	Colonial	25	5	14½
—	Commercial of London	20	6	22 23
4,000	Ionian State	25	6	24½ 25
60,600	London Joint-Stock	10	6	15
30,000	London and Westminster	20	6	24
10,000	National Provincial of England	35	5	35
20,000	National of Ireland	22½	5	19½ 19¾
20,000	Provincial of Ireland	25	8	41
4,000	Ditto New	10	8	19½
20,000	Union of Australia	25	6	24 25
10,000	Ditto New	2½	6	2½ 2¾
60,000	Union of London	16	5	10½

GAS-LIGHT AND COKE COMPANIES.

Shares.	Companies.	Paid.	Div. p. cent.	Price.
5,000	British (London)	£18	£1*	£17½
5,000	Ditto (country)	19	1½*	24
1,000	City of London	100	10	290
1,000	Ditto New	100	10	210
4,000	Equitable	50	2½	38
10,000	European	20	1½	18
12,000	Gas-Light and Coke Chartered Co.	50	6	57½ 58½
6,000	Ditto New	10	6*	12
9,000	General United Gas-Light Company	50	2	17½ 18½
10,000	Imperial	50	6	80
46,400	Ditto Debentures	100	4	100
8,000	Imperial Continental	25½	4½*	56 59
7,000	Ditto New	28	4½*	61
54,500	Ditto Debentures	100	5	100 102
2,000	Independent	40	6	64
3,000	London	50	6	46
3,000	Ditto	50	5	48
9,000	Phœnix, or South London	43	5	36½
1,000	Ratcliff	80	8	80
4,900	South Metropolitan	25	6	31½ 32½

* Those marked with an asterisk (*) are dividend per share.

LATEST CURRENT PRICES OF METALS.

LONDON, NOVEMBER 26, 1847.

		£ s.	£ s. d.
IRON—Bar *a*...Wales...ton		8 0	— 8 5 0
,, ...London ...		0 0	— 9 5 0
Nail rods ...	,,	0 0	— 10 5 0
Hoop(Staf.) ...	,,	0 0	— 11 10 0
Sheet ...	,,	0 0	— 12 15 0
Bars ...	,,	0 0	— 11 0 0
Welsh cold-blast foundry pig *b*		4 0	— 5 0 0
Scotch pig *b*, Clyde		2 8	— 2 10 0
Rails, average		0 0	— 8 0 0
Chairs		5 0	— 5 10 0
Russian, CCND *c*		0 0	——
,, PSI		0 0	——
,, Gourieff		0 0	——
,, Archangel		0 0	—13 10 0
Swedish *d*, on the spot		0 0	—11 5 0
,, Steel, fagt.		0 0	—16 0 0
,, ,, kegs		0 0	—14 0 0
COPPER—Tile *f*		0 0	—97 0 0
Tough cake		0 0	—98 0 0
Best selected		0 0	101 0 0
Ordin. sheets, *ib.*		0 0	— 0 0 11
COPPER—Ord. bottoms		0 0	— 0 0 12
YELLOW METAL SHEATHING		0 0	— 0 0 9½
TIN—Com. blocks *g*...*cwt.*		0 0	— 4 5 0
,, bars		0 0	— 4 6 0
Refined		0 0	— 4 10 0
Straits *h*		4 1	— 4 2 0
Banca		0 0	— 4 4 0
TIN-PLATES—Ch., IC *i*, box		1 0	— 1 10 0
,, IX		1 14	— 1 16 0
Coke, IC		1 3	6 1 4 6
,, IX		1 9	6 1 10 6
LEAD—Sheet *k* ...ton		0 0	—19 5 0
Pig, refined		0 0	—20 0 0
,, common		0 0	—18 0 0
,, Spanish, in bd.		0 0	—17 0 0
Red		0 0	—19 10 0
Dry White		0 0	—24 0 0
Shot (Patent)		0 0	—20 10 0
SPELTER—(Cake) *l* on spot		0 0	—18 0 0
,, ,, for arrival		0 0	——
ZINC—(Sheet) *m* export.*		0 0	—37 0 0
QUICKSILVER *n* ...*lb.*		0 0	— 0 4 6

a Discount 2½ per cent. *b* Net cash. *c* Discount 2½ per cent. *d* Ditto *e* In kegs ½ and ¼-inch. *f* Discount 3 per cent. *g* Ditto 2½ per cent. *h* Net cash in bond. *i* Discount 3 per cent. *k* Ditto 2½ per cent. *l* Net cash. *m* Discount 1½ per cent. *n* Discount 1½ per cent. * For home use it is 32*l.* per ton.

[FROM OUR CORRESPONDENTS.]

IRON (Welsh) has given way, and may be bought for shipment in Wales at 8*l.* per ton—speculators parcels still lower; the prices now quoted are, therefore, nominal, and paid only for small parcels. Staffordshire is not affected to an equal extent, but it is evidently yielding. In foreign, nothing doing. Scotch pigs are quite neglected.

COPPER, TIN, TIN-PLATES, and LEAD, are steady, with moderate demand.

SPELTER exhibits rather more firmness—several sales having been made for consumption, and stocks being very light.

GLASGOW PIG-IRON TRADE, Nov. 25.—We have had a very dull week in pig-iron: some holders, requiring to realise, have sold at 48s., for prompt cash. For cash against bill of lading, sales have been made at 50s. and 51s. To-day the market seems heavy, and nothing doing.

LEAD ORES.

Sold in London.

Mines.	*Tons.*	*Amount.*	*Purchasers.*
Callington	100	£18 7 0	Tamar Company.
Holmbush	15	17 9 6	Dr. Somers.
Herodsfoot	70	12 0 0	Combmartin Co.
Bwich Consols	25	12 12 0	Mather & Co.
Sold at Helston—			
Wheal Rose	80	17 12 6	Walker, Parker, & Co
Sold at Holywell, Nov. 25, 1847.			
Penyrhianblas	50	£10 1 0	Mather & Co.
Westminster	60	9 8 0	Walker, Parker, & Co.
ditto	15	9 12 0	ditto
Jamaica	50	9 7 0	Newton, Keates, & Co.
Belgrave	20	9 10 0	Mather & Co.
Fronfowno	150	10 0 0	ditto
Bwich-y-darfan	11	9 10 0	ditto
Halkin Hall	8	9 3 0	Newton, Keates, & Co.
Cwmsebon	13	13 7 6	ditto

BLACK TIN.

Mines.	*Tons.*	*Price per ton.*	*Purchasers.*
Birch Tor	6	£39 0 0	Calenick Smelting Co.
Drake Walls	12	42 12 6	Daubuz and Williams.
ditto	1	26 10 0	Calenick Smelting Co.
ditto	4½	24 0 0	ditto
ditto	4½	12 10 0	ditto
St. Agnes Consols	14½	41 5 0	Daubuz; Calenick; Williams.
ditto	1	24 12 6	Calenick Smelting Co.

COPPER ORES.

The following portion of the SWANSEA SALE, on the 18th inst., was omitted in our last

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Mines.	Tons.	Amount.
English Copper Company	250	£1289 11 6
Freeman and Co.	110	1733 11 0
P. Grenfell and Sons	129½	970 0 9
Sims, Willyams, and Co.	313	2986 10 0
Vivian and Sons	756½	10433 11 6
Williams, Foster, and Co.	1026½	15186 12 9
Schnieder and Co.	308½	8897 12 6
Total tons	2894	£41,497 10 0

Copper ores for sale, December 2.—Cobre 91, ditto 87, ditto 76, ditto 111, ditto 106, ditto 82.—Cuba 125, ditto 106, ditto 96, ditto 50.—Kapunda 76, ditto 67, ditto 62, ditto 49 ditto 48.—Berehaven 110, ditto 104.—Australian 60, ditto 50, ditto 48.—Chili 44, ditto 38—Paringa 44.—Gloster Slag 11, ditto 6.—Kanmantoo 11.—Total 1758 tons.

COPPER ORES.

Sampled Nov. 10, and Sold at Pearce's Hotel, Truro, Nov. 25, 1847.

Mines.	*Tons.*	*Price.*
Consolidated	91	£5 7 0
ditto	88	7 1 6
ditto	80	4 10 0
ditto	69	4 15 0
ditto	68	6 8 0
ditto	66	7 5 0
ditto	65	5 3 6
ditto	64	7 4 6
ditto	61	1 16 6
ditto	55	8 5 6
ditto	54	4 10 0
ditto	41	3 19 6
ditto	37

OFFICE FOR PATENTS, 7, STAPLE INN, HOLBORN,
J. MURDOCH (successor and late assistant to Mr. Hebert)
Informs INVENTORS and PATENTEES, that, at his OFFICE, they can obtain 54
REFERENCE TO A CLASSIFIED LIST OF PATENTS,
(THE ONLY ONE EXTANT), which shows at one view all the Patents ever granted for any particular object, whereby they may save much trouble and expense, and procure information not otherwise obtainable. BRITISH and FOREIGN PATENTS OBTAINED, and USEFUL and ORNAMENTAL DESIGNS REGISTERED.
SPECIFICATIONS carefully prepared, and REPORTS of ENROLLED SPECIFICATIONS furnished on moderate terms.
FINISHED and WORKING DRAWINGS executed with accuracy and dispatch.

NOTICES TO CORRESPONDENTS.

It will at all times save much trouble, and frequently considerable delay, if communications are simply directed—

To THE EDITOR,
Mining Journal Office,
26, FLEET-STREET, LONDON.

Also, to avoid trouble, POST-OFFICE ORDERS should always be made payable to WILLIAM SALMON MANSELL, as acting for the proprietors.

ADCOCK'S SPRAY PUMP.—We regret being unable to give the continuation of Mr. Adcock's communications on his Spray Pump in our present Journal—it shall, however, appear in our next.

"A Constant Reader" (Manchester).—A full report of Mr. Hunt's lectures, 'On Mining," will be given in the Journal, while they are in course of delivery in London—early in the ensuing year, we believe.

"M." (Leeds).—The statement is erroneous as to Mr. Stephenson having left London to superintend the construction of the canal in the Isthmus of Suez. Mr. S. is now in London, and we do not believe he has any intention of leaving—at least, we should think, for that undertaking.

"M. T." (Kensington) had better consult some broker, whose business it is to ascertain the value of shares.

OLD DELABOLE SLATE COMPANY.—We have been informed, that the last transfer was at 35*l.*—hence the alteration in price. Will our Plymouth correspondent authorise us to mark it at the previous quotation?

"Carbon."—A letter, addressed to our office, will be forwarded.

"J. A. N." (Balham).—We never advise respecting the sale or purchase of shares—apply to a broker.

We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses; not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

The MINING JOURNAL is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, NOVEMBER 27, 1847.

The general mercantile excitement, which has had so extensive and so injurious a prevalency, has, within this week or two, experienced a soothing, and, we trust, a decidedly restorative lull. Failures, which a short time since so sadly filled up the foreground of the commercial picture, are moved back into the distance, and, though not wholly obliterated from the canvas, have diminished to a mere spot or two here and here. Employment—the true symptom of reviving commerce—is becoming more abundant in the manufacturing districts; and the anxiety of practical men is less for the future—as to the results of which there is a general confidence than as to how the havoc of the past may be best compensated and repaired. The rate of discount has, within the last few days, been lowered to 7 per cent. by the Bank of England; and although that is still too high a tax for a temporary accommodation, still the effect of it will be to lower still further the rates charged in the provinces, where they have never been at the height which has prevailed in the metropolis. The stream of the precious metals, also, has well set in upon the country. The sum reposing in the coffers of the Bank of England, exceeding 10,000,000*l.*, which, with 5,000,000*l.*, the ordinary reserve, makes an aggregate of 15,000,000*l.* sterling, with which to feed, from time to time, the general business of the country. With this process still going on, we look upon a further reduction of the rate of interest in a few days, or in a few weeks, at least, as absolutely inevitable. In the midst of these encouraging indications—nay, conclusive proofs of returning prosperity—the Imperial Parliament has opened its session, and will make it its first business to remove the causes of the recent difficulties, and to take such measures as are within the compass of its power, to prevent, once for all, their recurrence. The general prices of mining shares will be seen from our quotation list; and we have great pleasure in noticing the steady activity, and the gradual improvement, of the market, as to this description of stock.

Our readers have, no doubt, read the Speech of her most gracious MAJESTY, delivered on the opening of Parliament, on Tuesday last, in the pages of some of our contemporaries. That the present and recent commercial difficulties, as well as the awful state of society in Ireland, should have occupied a prominent part of the Speech, and that their existence should have been deeply lamented, was, of course, to be expected. But, like all such documents, we cannot perceive in it any indications of the remedies to be proposed by Government. We are told, indeed, that something is to be done, to enforce obedience to the laws in Ireland; and that, if necessary, fresh powers will be applied for from Parliament, to suppress the fearful crimes, which are now daily committed in that unhappy country. All this is unusually vague, and it is doubtful how far it is intended to allow matters to proceed, before the RUSSELL Government consider it requisite to restrain the hand of the mid-day assassin by some coercive measures. We are told, that the existing law has been carried to the full extent, and yet it has been ineffectual in maintaining the peace, or the safety, of society. We need not, however, proceed any further on this subject, until the nature of the bill to be brought in by the HOME SECRETARY, on Monday evening, be ascertained. We should not be surprised if, after all, Lord JOHN RUSSELL will be compelled to have recourse to a Coercion Bill—the proposal of which he opposed last year, and defeated Sir R. PEEL's administration. We are convinced, and we think every impartial person will agree with us, that had the right hon. baronet succeeded in carrying his measure, the hands of the Government would have been so strengthened, as to have prevented, in a great measure, if not entirely, the murders and outrages which have recently taken place. We have heard it suggested, and we think not inappropriately, that many crimes would be prevented in Ireland, if the priests were in some measure made responsible for the discovery, or apprehension, of the perpetrators No doubt, the tenets of the Roman Catholic religion tend greatly to the difficulty of discovering the guilty persons; for if it is believed that, by confession, absolution will be received, the fear of punishment hereafter is wholly eradicated, while the priests consider themselves bound not to divulge the secret sins of their flocks. Some law, including such a provision, as we have alluded to, cannot, we consider, be complained of, after the events which took place a few days ago, in one case—a priest denounced a man from the altar, and the same evening he was murdered; and, again, another man was denounced, and he shared the same fate next day. This clearly shows the tendency of the priesthood, and their influence over the people.

There is one omission in the Royal Speech, which we are rather surprised at. In the spring of next year, the Act for raising a property and income tax will expire, and it will be necessary to take the subject into consideration. We anticipate that some important alterations will be made in this tax, notwithstanding the silence of the Members of Government. The pamphlet,* to which we referred last week, written by one who assumes the name of "Plain Facts," is generally believed to be the production of a gentleman of the PEEL party, but who has the means of knowing the intentions of the present Government. Should this be the case, we have sufficient indications in his pamphlet to make us expect, not only a continuance of an income tax, but an augmentation of it in some shape or other. We would refer our readers to the following passage:—"The extension of the arts and sciences to all parts of the civilised world has rendered it necessary to add fresh vigour to our own resources. The most beneficial mode of accomplishing this desirable object is by cautiously and gradually relieving the burdens upon commerce, and by a fair and equitable division of taxes, *according to the abilities of every one in the state.* There are a few received political maxims, which are the basis of all sound financial codes:—1st. When an increase of the annual expenditure becomes necessary for the security of property, or in vindication of the honour and rights of a nation, the annual revenue ought to be increased, if necessary, to the utmost the people can spare.—2d. The subjects of every state ought to contribute towards the support of the Government, as nearly as possible, *in proportion to the abilities, or incomes, which they respectively enjoy.*—3d. When the higher orders of any country, especially those who have a share of the Executive Government, do not screen themselves from taxation on emergencies, the trade, revenue, and credit of the state, will, in a proportional degree, be promoted, and public confidence thereby maintained."

Should these "maxims" be the basis of the financial code to be proposed by the present Government, it will certainly receive the support of all impartial men, both in Parliament and in the country: By "cautiously and gradually relieving the burdens upon commerce," we understand, of course, the duties upon the necessaries and more immediate comforts of life, and we except those articles which are considered "luxuries," and which belong to the wealthier classes of society. And, again, some consideration must be made with regard to those who "contribute towards the support of the Government, as nearly as possible, in proportion to the *abilities*, or incomes, which they respectively enjoy." We do not consider that any income under 300*l.* should be liable to be taxed. Suppose a case of a man with a family to support; how can his "ability" enable him to spare anything from a smaller income, "towards the support of the Government?" And if his income depends upon his own exertions, as a professional man, or from any source, except from *real property*, he should not be asked to contribute in so great a degree, as he who enjoys an income from the funds, or from land.

We would like to see all incomes above 300*l.* or 400*l.* per annum subject to a moderate tax; but in the case of the landholder, or the fundholder, inasmuch as his income is more certain, and requires less exertion to be obtained, than that of the professional man, the tradesman, or the merchant, we think that his ability, or income, would enable him to pay a higher proportion. We cannot agree with those who would entirely repeal the income tax, and substitute one on property alone—for we think that every one—no matter from what source his income arises—is not only bound to contribute towards the support of the Government, but is interested in doing so, because, upon the safety and protection of property in general, depends the continuance of those advantages which he enjoys. We have no doubt the Government will take the opportunity of remedying the evils and objections, which have been so justly urged against the present property and income tax; and that they will endeavour to improve the mode of collecting it—especially with regard to fluctuating incomes—and in facilitating cases of appeal, when an overcharge has been made. We cannot imagine why a tax on income should be considered entirely a "war" tax, for there are emergencies, when the credit and prosperity of the state render it as essential to adopt extraordinary measures for its support; but at no time is there a more fair or equitable mode of raising the revenue, if it is levied with due regard to the sources from which each individual receives his income. As to the remarks of our Protectionist contemporaries, that the necessity of continuing the property and income tax arises from our free-trade policy, and that, consequently, the latter is ruinous, it only shows their own short-sighted and narrow views of such matters. Why should the labourer, or artizan (who had no income but his daily wages, and that most uncertain), pay towards the support of the state, equally with him who enjoys a good or certain annual income from a source, the existence of which depends on the power and protection of Government? But we need not dwell longer on this subject at present, as we shall, no doubt, have another opportunity of recurring to it.

We are very happy to see that Cornwall is gradually taking itself out of the class of unclean counties. A short time since, we called the attention of the authorities at Truro to the propriety of adopting some sanatory measures, no less with a view to the abatement of that great epidemic, which is every week drawing nearer to our shores, than for the cleanliness and convenience, under ordinary circumstances, of that improving and interesting town itself. We have reason to hope, that those suggestions have not been wholly disregarded. Falmouth, a town of scarcely less importance, and, in some senses, of much more, has procured an Act of Parliament for the establishment of water-works, by which a full and regular supply of an element so necessary to the convenience and the health of the resident inhabitants is secured to them; and by which, also, the shipping, making its roadstead a rendezvous, may at all seasons have their casks and tanks replenished with an article of such universally cleansing and refreshing efficiency. At this moment, in Penzance, the western *ultima thule*, a race is being run for fresh water. In rank, the corporation is the first candidate; but the people, with their own particular champion, have the most breath and sinews; and we almost see that the latter will be the winning party. The general argument which the inhabitants of Penzance level against the corporation is this, that, if the latter get the right of supplying the town with water, it will be made a comparatively expensive article, and, perhaps, a source of corporation emolument; but that, if they are allowed to do their own work in their own way, they are likely to do it most efficiently and most economically. We cannot be insensible to the force of this reasoning; but, the controversy apart, we are only anxious for the progress of the works by the one party or the other; and, when we shall know that the port and town of Falmouth is purified by the plenitude of its reservoirs, and fountains of water at hand on all possible occasions; and that Penzance—that soft, southern Pisa of the kingdom—is made more sanatory, and more pure, by the fullness of its water-courses, we shall think it all the happier for those who dwell in or resort to them, and that the best means which could be applied are taken to prevent their being the residence of a foreign pestilence, even for a day.

We had reserved to ourselves a further, and as we think a final, refutation in figures, of the double error of the *Cornwall Gazette*; but, after its declaration of last week, we have no hope of reaching the mind of that Journal. Its misstatement was two-fold—first, as to the amount, and the causes, of the Cornish loss, subsequently to the Tariff alterations of 1842; and, secondly, as to what was said in this Journal, in respect of the extent of that loss. On both these points we endeavoured to disabuse the *Cornwall Gazette*, of the deep errors into which it was running, by pointing out the real extent, and the true causes, of the loss complained of, as well as how inaccurately—how falsely in his comment—he had dealt with our first statement, as to the amount of loss actually incurred. All this we did for his instruction, and have earned his contumely for our pains; for the *Gazette* turns sharply round a corner, and is lost sight of, exclaiming—*I am not answered.* Let us see; it is the statement of the other side, that, in the four years following 1842, we imported 76,000 tons of copper ore beyond the importation of the four preceding years. Debiting the Tariff, therefore, with the wages, and the profit which the county would have shared, but for the flowing in of these foreign ores, whose maximum value was 760,000*l.*, they claim 10 per cent. on that amount as the adventurer's profit—viz.: 76,000*l.*, and 20 per cent. as miners' wages, and other incidental costs—viz.: 154,000*l.*—making a gross total, for the four years up to 1846, of 230,000*l.* distributed over the period in which foreign copper ores have been allowed a free progress into the markets of England. This is the amount of their own claim, and we admit it to be a sufficiently serious one; but there is all the difference between proving a loss of some 60,000*l.* per year, and in merely declaring, as the *Cornwall Gazette* has done, a loss of four times that amount. Against this annual deficiency must be set off the advantage arising out of the lesser price of those chief articles of mining consumption, whose value the Tariff brought down. Doing this, we shall have brought ourselves very near, indeed, to the figures which form our true sum—much nearer than the wild statement made on the other side could ever have brought us. We hope the strong appetite of the *Gazette* for an answer will be at length in a good measure appeased, learning, as a general lesson, that when the unsoundness of an opinion is temperately pointed out, it is not wise to wait its being absolutely shaken to pieces.

In the few remarks, contained in this Journal of the 20th inst., in reference to the transfer of the Dock property of Bristol to the corporation of that city, we find we understated the urgency of the case, as regards the immediate necessity for a change of management. It appears that, under the administration of the Dock Company, the port dues and imposts for landing and warehousing general merchandise, have been kept so disproportionately high, as to have diverted from Bristol and its waters that maritime activity by which otherwise it must have been advantageously distinguished; that, in fact, the extravagant port dues have nearly ruined the port. The corporation is quite aware of this circumstance, and it is their full intention, on obtaining the legal transfer of the company's powers, so to remodel and liberalise both the charges and accommodation of the port, as shall remove the hinderances presently existing to its becoming a place of greatly increased maritime resort.

ACCIDENTS IN MINES.—On the authority of a communication received from Sir George Grey, we have the satisfaction of announcing, that the subject of Accidents in Mines will receive the attention of Parliament at an early period of the present session.

The Institution of Civil Engineers has awarded "the Telford medal in silver, as well as the council's premium of books, value five guineas," to Mr. Joshua Richardson, C.E., of Neath, for his paper on the "Ventilation of Mines," which was read at a meeting of the institution on the 16th of March last, and published in the *Mining Journal* of the 27th.

THE "CRICKET" STEAMBOAT EXPLOSION.—H. R. Heaseman, who was indicted for manslaughter, in having caused the death of T. Shead, by criminal negligence, in the discharge of his duties as engineer of the *Cricket*, was tried yesterday, at the Central Criminal Court, and found guilty. He was sentenced to two months' imprisonment—without hard labour.—[We shall, in our next, enter into an examination of the cause of the explosion, with a view of showing that the jury arrived at an erroneous conclusion.]

CONTRACTS FOR COALS TO THE CAPE OF GOOD HOPE.—The Commissioners for executing the office of Lord High Admiral of the United Kingdom of Great Britain and Ireland, concluded their contract on Thursday last, for the supplying and delivering into the store of her Majesty's naval yard, Simon's Town, Cape of Good Hope, 2000 tons of Welsh coals fit for the service of her Majesty's steam-vessels, which makes, with the former contracts of the 11th and 18th of the present month, upwards of 10,000 tons, for which, it is stated, the tenders were rather numerous, and a strong competition. The discovery of extensive coal beds, and of an excellent quality, in the vicinity of Port Natal, and the Kieskamma River at the Cape, will, no doubt, lead to mining enterprise in that colony, which promises to become a very prosperous settlement in a few years hence, as it is most salubrious and fertile, abounding in corn of every description—fruit, horned cattle, sheep, &c., and rich in minerals.

COALS FOR INDIA.—The Home and Finance Committee of the East India House have given notice that they will be ready, on Wednesday, the 8th of December next, to enter into a contract for the delivery of 2000 tons of the following description of coals at Alexandria, in Egypt:—West Hartley coal, Carr's ditto, Buddle's ditto, Davison's West Hartley, Hartlepool West Hartley, and Stewart's Wallsend Steam Coal (screened). The tenders to be sent in to the secretary, before 11 o'clock of the said day. This, with the former contract of the 17th instant, for Bombay, will make 7000 tons of British coal for the service of the steam-vessels belonging to the East India Company in India and Suez. Although coal abounds in various parts of the Indian empire, it will be some years before the mines can be worked to any great extent; and until the facilities afforded by railway to convey it to Calcutta, Madras, and Bombay, are completed, the company must continue to import their supplies from this country; and it is doubtful whether the coal of India will suit steam navigation, unless mixed with the English and Welsh.

IMPORTATIONS OF THE PRECIOUS METALS.—The importations of the precious metals during the present week have not been so considerable as last; but still they show that, if gold is required, it can easily be obtained from the north of Europe, particularly Russia. In 1846, the mines of that wealthy mineral empire yielded no less than 76,800 lbs. of gold, and 54,000 lbs. of silver—the former was valued at 3,588,480*l.*, and the latter at 156,000*l.* sterling; and at present there are upwards of 19,000,000*l.* of gold in the fortress of St. Peter and St. Paul, at St. Petersburgh, belonging to the State, but which the Emperor has at his personal disposal, to invest as he may think proper. The produce of the mines, this year, in gold, silver, and platinum, has far exceeded the above; and to what extent the workings may be carried, it is impossible to ascertain, as the further they proceed the ores become much richer—so that mining operations will be carried out on a very extensive scale, during next year, as the Oural and Altaïa Mountains appear to be inexhaustible, and new mines are being discovered in Siberia, which will give occupation for many years to those now in exile, who, after a certain period, are once more to become free, and all past political offences pardoned, and forgotten. The *Countess of Lonsdale* steamer, from Hamburgh, brought over 16,000*l.* in gold.; and the *Giraffe* steamer, from Rotterdam, 300*l.*; by the next arrivals, a large quantity is also expected. Although immense sums have been exported from this country, during the present year, to the continent, Odessa, the Levant, and America, for the purchase of grain, there is little doubt that a very great portion will soon be returned, so that there will be no scarcity of specie or bullion, especially as England, at present, offers a better market than any other country for the precious metals. The next arrivals from the United States (the 30th inst.), and by the West India Mail (Dec. 7), are looked to with some interest, as a large amount is expected. When we look at the returns of the Bank of England, we find they are most cheering; and, now that the quantity of the precious metals in the coffers of that great national bulwark of British credit and commercial influence are on the increase, there is every hope that ere long the present depressed state of the country, and the monetary crisis, will recover again with greater vigour and firmness, and that speculations, and enterprise of every description, will be carried on, for the future, with more caution. The year 1847 will long be a lesson to individuals to avoid the catastrophes which have befallen the late Governor of the Bank of England, two of the directors, and several of the leading firms in the city, and other parts of the country, by adopting a prudent course of carrying on their affairs with stability, and not a reckless *mania*, regardless of their own ruin and that of hundreds of others, for the grasping sake of gain. Although the amount of gold coin and bullion in the issue department of the Bank is about 8,000,000*l.*, and silver bullion 1,500,000*l.*; and in the banking department, 500,000*l.*; yet the directors, at their back-parlour meeting, on Tuesday last, made no alteration in the minimum interest on their advances (discounting and loans), which still remains the same (8 per cent.), to the great disappointment of many parties in the city and country, as it was expected, now that they are improving themselves, they would have some consideration for others who were placed in pecuniary difficulties.

THE ELECTRIC TELEGRAPH IN BAVARIA.—The King of Bavaria, with that usual desire to promote the progress of industry, and the welfare of the inhabitants, by the introduction of the various improvements and advancements making on the continent and Great Britain, has been the first to patronise the electric telegraph, which is now to be established on all the railways throughout his dominion—so as to correspond with those of Austria, Prussia, Hamburgh, Holland, Belgium, and France.

NEW RAILWAYS IN GERMANY.—The Grand Duke of Saxe Weimar Eisenach, the Duke of Saxe Coburg Gotha, and the Duke of Saxe Meiningen, have just concluded a treaty for the creation of several railways of great importance to central Germany. These railways will unite Lichtenfels, Coburg, Eisberg, Hildebourghausen, Meiningen, Eisenach, and Sonnenberg. The expense is estimated at 7,000,000 thalers, or 28,000,000 fr. The works are to be commenced next spring.

* *An Answer to Lord George Bentinck's Address, with a Few Words to the Quarterly Review.* Smith and Elder. Ridgway.

PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

Referring to the recent contracts for the supply of coal to the Post-office, the *Journal des Chemins de Fer* expresses an opinion, that the English could, if they pleased, have carried off all of them. This confirms the opinion I myself expressed. The observations of your contemporary may, perhaps, be worth quoting:—"The *Mining Journal*," it says, "believed that the English would obtain *all* the contracts. We foresaw, and predicted, that the French would obtain a considerable portion of them. But we are compelled to admit, *that it is to the English themselves* that our prediction owes its realisation. In fact, if our readers will observe the prices which were accepted, they will be surprised that the English did not offer for, and obtain *all*, the lots. Thus, for example, Mr. Jackson obtained the contract for the deliveries to be made at Malta, Athens, Constantinople, and Alexandria, at 3 fr. 79 c. the 100 kilogrammes; whilst M. Payon obtained the contract for Calais at 3 fr. 39$\frac{1}{2}$ c. the 100 kils.; M. Talabot, for Bastia and Ajaccio, at 4 fr. 30 c.; M. Vincent, for Marseilles, at 3 fr. 74 c.; and M. Talabot, for Marseilles, at 4 fr. 92 c. Now, it is evident that, if Mr. Jackson can deliver coal at the distant destinations of Malta, Constantinople, Athens, and Alexandria, at 3 fr. 79 c., he could deliver it for less than 3 fr. 39 c. at Calais, 4 fr. 30 c. at Bastia, 3 fr. 74 c. and 4 fr. 92 c. at Marseilles." Nothing can possibly be clearer. You see, then, that I did not speak lightly, in saying that the English could easily beat the French at the competition. They might have done so; and if they did not, it is because, for some unknown reason, they did not choose.

The truth is, that the French coal has not a chance in competition to English, provided the English coal sellers do not thwart their own interests, by asking too much. First of all, English coal is infinitely better than French in every respect, especially in those qualities which are used in steam vessels, locomotives, and manufactories. Next, English coal is considerably cheaper. It is true that, at the mouth of the pits, there is not much difference in the price; but then the coal basins in France are nearly all at a vast distance from the coast, and France has few canals and railways, and but indifferent river navigation—so that the cost of conveyance makes an enormous addition to the price; whilst in England it is very slight. And with respect to the coal, which has to be sent to naval stations, France has not only to struggle against the difficulty and expense of getting the coal to a sea-port, but she has then to pay an enormous price for ships to convey it; whilst, in England, ships *almost* sail up to the very mouths of the pits, and conveyance of them is not dear.

The following is given, in the Official Reports of the Mining Engineers of the Government, as the average price of coal at the pits' mouths of the principal coal basins:—The Loire basin, 74 c. the metrical quintal; Valenciennes, 1 fr. 21 c.; Alais, 68 c.; Le Creuzot and Blanzy, 87 c.; Aubin, 71 c.; Aix, 1 fr. 12 c.; Commentry, 71 c. The price of conveyance is not given; indeed, it could not be, for it not only varies in different districts, but varies from time to time. The following calculation has, however, been made of the expense of delivering 1200 kilogrammes of coal from the Loire pits at Paris:—Price at Andrezieux, 16 fr.; conveyance to Paris, 29 fr.; octroi of Paris, 4 fr. 95 c.; conveyance to the purchasers residence, and profit of the retailer, 7 fr.—total, 56 fr. 95 c., or about 46s. 7d. But what, perhaps, will give your readers a still better idea of the expense of conveying coal in this country, is the fact that, in 1845, the coal delivered to the iron works in the Haute Marne cost actually *seven times* dearer than at the mouth of the pit. With these figures before them, your readers will, perhaps, be able to institute a comparison, which will give them a very fair notion of the difference in the prices of English and French coal. The result of it will, I think, fully confirm the assertion that, if the English coal owner had so pleased, they could easily have obtained all the Post-office contracts.

The crisis has somewhat damped the spirit of speculation; but I still entertain the opinion, that the present season will be a remarkable one for mining enterprise. We have had proofs of this within the last few days, by the formation of different mining companies. A company, for example, has just been formed for working the tin mines of Villeder and Maupas, in the department of Morlihan, the discovery of which I recently mentioned. The company has adopted the Cost-book System, which, I believe, has hitherto been unknown in France. Another company has been formed, with a capital of 3,600,000 fr., in 7200 shares, for working the coal-pits of Ferques, near Boulogne-sur-mer. The company which held them had, not long since, to dissolve itself. A French company has also just been formed, in Belgium, for working a patent belonging to M. Leclaire, for the manufacture of *blanc de zinc* and colours, in which neither lead nor copper form the basis. Another company has been established for working the mines of copper, lead, and other mineral substances in the concessions of San Augustin, Foucalderas, Salinas, Longas, and *twelve* other places in Spain. The capital is fixed at 332,500 fr., divided into 665 shares, of which not fewer than 348 have been given to different persons for their concessions. The company takes the name of Dumarbray and Co.

Clamours for the reduction, or even total abolition, of the duty on salt, are becoming louder every day; and it is difficult to see how the Government can well avoid ratifying them in the approaching session. The number of salt mines is not considerable in this country. In 1845, only two were worked—one of which is in the department de la Meurthe, of 1781 hectares in surface; the other, the famous Gouhenans Mines, of 688 hectares, is in the Haute Saone. There were, however, 67 salt marshes, 249 *lavents*, as they are called, and 16 salt sources. The total yield of salt by the mines, marshes, &c., was 3,385,495 metrical quintals, of the value of 12,984,205 fr. A reduction of the duty would, no doubt, increase the production; but I am not quite sure whether France might not find it necessary to import salt, if the duty were totally abolished. True, her "marshes," which are only tracts of land, into which sea water is let, and then made to evaporate, appear to afford an inexhaustible supply; but, probably, importation would be found cheaper.

In a return, respecting the navigation of the Seine, it is stated that, out of 44,957 tons of different descriptions of merchandise, which left Havre or Paris in the course of the last quarter, not fewer than 7902 tons, consisted of metals.

One of the embranchments of the Strasbourg Railway is to Sanebruck, which is close upon the coal districts of Germany. It is believed, that the iron-works of the Haute Marne, will, probably, draw their principal supplies of fuel from Prussia, when the railway shall be completed. It is also very probable, that the iron-works in Prussia will obtain considerable supplies of iron ore from that department, which, as your readers are aware, yields more ore than any other in France.

The shareholders of the Royal Mines of Villefort et Vialas are to hold a meeting on the 6th December, to take into deliberation certain propositions which have been made to them, with respect to the coal-pits of Combe Redonde, Portes, and Seneches.

It is stated, that the Coal Company of the Loire has just obtained a loan of 6,000,000 fr. from one of the principal banking houses in this capital, on such conditions as to make the interest equal to 6½ per cent. The loan is to be paid in 25 years.

The weekly letter from St. Dizier, of the 18th, says:—"That at the recent fair of Chalons-sur-Saone, no important transactions took place. Iron was at 390 fr. to 400 fr. At St. Dizier, no decline on the *fers lamités* of the Loire had taken place; but one was expected of 20 fr. The establishment of Chatillon had lowered its prices 10 fr.; and Dijon, and other iron-works, offered their iron at 380 fr. and 385 fr.; *fontes blanches* had few purchasers at 170 fr. The products by *air chaud* were out of favour. The price of cast-iron of Comte kept its price; and the *fonte roches* of the Haute Marne were 185 and 187½ fr.—*Paris, Wednesday.*

BELGIUM.—On perusing the dispatch of the Belgian diplomatist at Stockholm, to which I referred in my last, I find, somewhat to my surprise, that the Belgian importations of iron to that country have not been of the same importance as other of the staple branches of Belgian industry. The diplomatist does not give returns of the imports made into Sweden; but he publishes the following table of the imports made into *Norway*, in 1844;—

	Sweden.	Denmark.	Altona.	Hamburg.	Holland.	Belgium.	England.	France
Iron in bars ..... *Skl.**	4400..	— ..	64..	— ..	9..	4..	1772..	—
Iron pots, tinned over, &c...	— ..	81..	1156..	— ..	4558..	— ..	3343..	—
Ditto, other descriptions....	1628..	197..	845..	1058..	447185..	2628..	3076..	192
Stoves, &c.	1017..	11850..	6437..	241..	20481..	— ..	22977..	598
Chimney backs.....	12760..	44..	7700..	— ..	462..	— ..	49000..	208
Nails, of 3 in. and upwards..	24104..	— ..	— ..	— ..	— ..	— ..	1064..	—
Ditto, 3 to 3 inches	271577..	— ..	— ..	— ..	29..	503..	194..	—
Ditto, 3 in. and under.....	7161..	3955..	1490..	297..	4419..	23..	4197..	32
Other articles in iron or steel, unpolished	49823..	1500..	36628..	7278..	41502..	4077..	89717..	141
Ditto, polished	681..	720..	20077..	3408..	10579..	497..	15470..	47

* 320 lbs.

On the whole, this document is satisfactory to England; but I hope that our exporters will not neglect to draw from it the lessons which it teaches, and that is, to spare no endeavours to drive out the imports from Sweden, Holland, and the other competing countries. It is strange, indeed, that such a country as Holland, for example, which draws almost all its iron from Belgium, should actually make more important exports of certain objects in iron than England, the great iron country of Europe. Our Belgian diplomatist remarks as follows, on the sorry figure which Belgium cuts in this return:—"That Sweden, by its Custom-house privileges, its relations, its proximity, its natural productions, should succeed, notwithstanding the comparative highness of the price of its articles in iron, to supply, in a great measure, the wants of Norway, may be conceived; that England should rivalise with it, and drive it out of the market for certain articles, shows that competition is possible; but, in seeing the participation in this branch of trade of Denmark, Altona, Holland, by the side of that of Belgium, would it not be said, that Belgium has no iron ore, and that it is those countries which possess our numerous forges and our able workmen? In iron, also, we must admit that Belgium does not profit by all her advantages. She allows her market to be supplied in part by the trade of the localities which only operate at second hand—a market which is as open to her as it is to England. Belgian iron thus exports a multitude of charges, from which it would be freed, if the trade was effected in a direct manner." The diplomatist seems the more surprised at the ill-success of Belgium in Norway, from the fact, that its iron is cheaper than that of Sweden; and that, in several markets, it is able to dispute with the English. He particularly mentions Brazil, for which Belgian nails have found a very important outlet, in competition with those of England and Sweden.

In the export of portative arms, which is one of the main branches of Belgium industry, the diplomatist complains, that Belgium does not send anything like the quantity she ought to do. In 1844, she only sent a quantity of arms, representing in weight 10 livres—whereas, Sweden sent 18; Russia, 5; Denmark, 182; Altona, 439; Hamburg, 166; Holland, 1101; France, 18; and Spain, 25. There is, however, to me one thing far more surprising than this insignificant expedition of Belgium; and that is, to find no mention at all of any import from England.

The diplomatist states that, in Norway, there are two classes of purchasers—those who pay ready money, and those who take credit. It is (he adds) because the Belgians have not the means, nor the machinery, necessary for selling on credit, that they are outstripped by the merchants of other countries. This little fact is worth noting by our exporters.

The delays which take place in the Government offices in mining business are really scandalous. Within the last few days, notice has been given of the rejection of demands for concessions of mines, made so far back as 1837 and 1836!—10 and 11 years to decide on such simple affairs! The demands which have been refused were those of M. Namur, for the concessions of mines of copper, coal, manganese, sulphur, &c., at Antheit; of Messrs. Leroy and Co., of lead, iron, and calamine, at Hoy; of M. Debris, of similar mines in the same place; and of the *Société Metallurgique de Corphalie*, for concessions at Antheit.

Messrs. Decrosne, Cail, and Co., are constructing machinery, on a gigantic scale, for the Dutch sugar manufactories in Java, and other places.

THE ISTHMUS OF SUEZ—THE CANAL PROJECT EXPOSED.

We have received a long letter from Alexandria, in which the conduct of certain French schemers, in puffing a project never seriously contemplated, is ably exposed. Our correspondent reiterates what he has before stated—that the canal cannot be constructed, without so vast an expense as to forbid all hopes of its ever even paying a low interest on the original outlay; and, secondly, even if it were constructed, it would soon be found useless, except for a petty trade between Trieste and some other ports of the Mediterranean, and the shores of the Red Sea; whilst none of the great high-roads of commerce—as that round the Cape—would be deserted for it; and, thirdly, that all the real advantages that a canal could afford, and more, may be obtained by a sober and rational plan, which proposes—with a common sense that shows its English origin—to keep the present route, to preserve the present means of conveyance, where they are tolerably efficient, and to supply the gross defects of the transit across the Suez desert by means of a railway of about 80 miles—part of the materials of which are already in the country, and which will cost under 300,000*l.*

The following portion of our correspondent's letter (which, we regret, is too long for insertion entire) is particularly worth attention:—"I will not, at present, go into more details, but will merely say, that if it were possible to imagine that the *Journal des Débats* could lend itself to bolster up a mere piece of stock-jobbing, it would appear to have done so *on* this occasion. The next statement I must allude to is that to the effect, that the engineer, Mr. Stephenson, now Member of Parliament, has connected himself with this affair. I hope that gentleman will make a statement to clear up all doubts, as I can assure him that his name is used very extensively, and that many persons on the continent are induced to join in a speculation which may prove a source of disaster and ruin to them, by the positive assurance that he is not only connected with the company, but is shortly to undertake a journey to Egypt, for the purpose of making a general report. I do not believe these stories, and am sorry to give them any additional circulation, but it really becomes necessary. The *Débats* goes on to say, 'The company is in possession of positive proofs that it will be easy to construct a canal of 27 ft. in depth—that is to say, more than is necessary to float a three-decker.' I challenge the company or the *Débats* to produce these proofs in a tangible shape, and I pledge myself to overthrow every one of them to the satisfaction of every reasonable person. What they mean by easy is, capable of being performed at an expense of little more than 1,000,000*l.* I am ready to show that five times the amount will not suffice." * * * "The upshot of the matter is, that the scribe of the *Débats* fears the railway will be made after all, and he dreams a sort of dream. He pictures to himself the project of the canal finally abandoned—M. Enfantin, buried by the indignant shareholders of the Compagnie de Construction beneath a mountain of coupons Mr. Stephenson laughing in his sleeve—M. Negrelli walking off with his report under his arm—Lord Palmerston smiling—M. Guizot in a syncope—M. Metternich shrugging his shoulders; and, worst of all, Mr. Galloway laying down the rails. His brain turns, and he begins to see other things besides. He sees a 'numberless corps of engineers, mechanicians, stokers, engine-drivers, navigators, smiths, waggoners, clerks, draughtsmen,' all just imported from perfidious Albion. The Suez desert twists itself into a resemblance with the coast of Syria. Mr. Galloway assumes an odd sort of resemblance to Commodore Napier, and suddenly puts himself at the head of the formidable corps above described, tosses up his cap, and rushes like mad to conquer Egypt, and annex it to the British empire. 'Let the Viceroy remember,' it adds in conclusion, 'what a handful of Europeans did in China; or, without going so far to look for examples, that in 1840, the landing of 900 Europeans on the coast of Syria sufficed to disband, to destroy without a battle, the army which the year before had gained the battle of Nezib.' I am sure Mr. Galloway will be looked upon hereafter as a very suspicious character in the court of Egypt, if the *Débats* can persuade the Viceroy that he is meditating the conquest of his country. Does the writer believe that such trash will go down here?"

NEW MINING AND EXCAVATING MACHINE.—We understand that Captain Shrapnell, R.A., the inventor of the well-known "Shrapnell Shells," is only awaiting the assistance of a capitalist to bring before the public a new apparatus invented by him, that will render earthwork and cutting through solid rock a comparatively easy affair, and will reduce the difficulty and expenditure of time and money, consequent on those operations, as conducted under the present system. By the aid of this new machinery, shafts are from henceforth to be sunk, and submarine obstructions removed, with an immense economy, both in time and money. Indeed, this apparatus will cause a new era, not only in mining, but in railway engineering.

MINING IN SOUTH AUSTRALIA.—We learn, by recent news from Adelaide, that the shareholders of the Burra Burra Mine, have received a second dividend of *fifty per cent.*—consequently, they have now had returned the whole of their paid-up capital in less than two years.—Copper ore, said to be very rich, has been found near Portland.

MINING IN AMERICA.—Under date, New York, Oct. 30, a correspondent of the *Birmingham Journal* writes—"The fall trade is now concluded, the demand for goods has been regular, and prices of late have been improving. The stocks of hardware on hand are light. The iron trade is progressing rapidly as ever; in three counties in Ohio, 19 blast furnaces have been erected within the last year, and are now in active operation. Their annual produce is 1500 tons of metal each, making an aggregate of 28,500 tons; this at $25 a ton, which is below the present price, makes no trifling sum for a region of ridges and wild ravines to produce. The manufacturing trade of Pittsburgh, called the "Birmingham of America," is very good; all the pig-iron received down the Alleghany finds ready purchasers at good prices, varying from $30 to $34 per ton. The houses that manufacture nails are overcrowded with orders, and an advance on the article is talked of during this fall, or commencement of winter. Pittsburgh prices of nails, $3 75 c. for tenpenny, from puddled and boiled iron; $4½ per 100 lbs. for the same from Juniata iron. The manufacturers of glass in that town have twice advanced their prices during the present fall. A sale took place last week, when window glass A No. 1, sold for $3½ per box, for 8 by 10; $4 for 10 by 12. The Pittsburgh and Boston Copper Company, on Lake Superior, publishes the following statement of the weekly yield of the "Cliff Mine" for five weeks:—Week ending July 17, 44,553 lbs.; week ending July 24, 37,227 lbs.; week ending July 31, 44,312 lbs; week ending August 7, 58,349 lbs.; week ending August 14, 45,019 lbs. The above was delivered weekly at the warehouse at Eagle River; in addition to which they average 25 tons per week of copper rock, estimated to yield from 10 to 12 per cent., employing 95 men, and the expenses about $1000 per week." This copper region is destined at no distant day to exercise a great influence on the markets of the world—the attention of our capitalists becomes every day more aroused to its importance. The working of a new copper mine in New Jersey has proved a successful experiment, some 60 hands are now fully employed upon it. While on this subject of manufactures, I may as well notice incidentally the fact, that a quantity of iron was sent to Rodgers and Sons, of Sheffield, from the celebrated Missouri Iron Mountain, for the purpose of being tried in cutlery. They have returned it made into beautiful specimens, and report that excellent steel can be made from it.

Original Correspondence.

MINING IN CORNWALL.

SIR,—In my letter, in last *Mining Journal*, I mentioned the mines to the west of a line from the Mount to St. Ives, and a great many of them, as being very rich, both in tin and copper. Since writing that letter, I have again referred to my notes on that district, and rather fear it did not convey the lively feeling with which I was prepossessed in favour of that district, particularly so when it is considered that royalties in that part are generally considered tolerably fair between lord and adventurer. I will now attempt to give an outline of the mines to the east of the flat ground between the Mount's Bay and St. Ives. Although some trifling trials have been made in Treloweth estate, St. Erth—20 or 30 fms. deep in the flat ground, mentioned in my last—still they are ineffectual, and acknowledged to be so by the company working them—inasmuch, as they built a steam-engine house, with the intention of putting up a steam-engine, to work the mine properly; but, from circumstances easily explained, the engine was never put to work. Had these trials been made at a greater depth, or further west, in either case, it would have brought them nearer the junction of the granite. The lode in this mine is a large and fine one, with good bunches of ore, so far as it has been tried. Besides this lode, there are several oblique ones to it, running more direct for the granite, which must, according to the general rule, be productive near the change of measures—indeed the ground, less than a mile from this lode to the granite, speaking from analogy, appears to me to be good mineral ground. West Wheal Alfred, about two miles to the east of Treloweth, on the same lode, has been extensively worked, to 80 or 90 fms. deep, with large returns; but scarcely enough to pay the cost of working. This was an expensive mine to work, being heavily watered, occasioned by the perviousness of the rock, admitting the water from the sea, which flows over the Hayle bar into the hollow, close to, and west of, the mine—indeed, four or six weeks, at furthest, was sufficient to form a complete stratified rock in the boiler, from 4 to 6 in. thick, of such firm texture, and so strongly cemented together, as to require boring and blasting with gunpowder. A mile to the east of the latter, and on the same lode, is Wheal Anne Mine, which has been extensively worked, 80 or 90 fms. deep, with large returns, but insufficient to pay the expense of working; this mine was also heavily watered. To the east, about a mile, in the parish of Phillack, on the same lode, is Wheal Alfred—a mine extensively worked, 130 or 140 fms. deep, on or adjoining, but to the east of it, the great channel of iron elvans before mentioned. In the working, previous to 1815, this mine yielded a return of 500,000*l.*—leaving to the adventurers a clear profit of 150,000*l.*, on a capital certainly less than 10,000*l.* Here, as encouragement to the adventurers, the royalty paid was a mere trifle, if anything, till the capital had been repaid, and afterwards not more than $\frac{1}{24}$th or $\frac{1}{25}$th; and I believe it was again given up, or much reduced, when the mine ceased to give profits. The main lode in this mine runs at a great angle at its junction from the iron elvans, and is intersected about 200 fms. to the west, with a north lode separating from it 20° or 25° in going east, running within 20° or 30° of the direction of the elvans, and forming a junction with them to the east. The north lode was first discovered by working the south one at the 90 fm. level, and was very rich for nearly 100 fms. east from the junction, and held rich to within 60 fathoms of the surface—above which there was scarcely the appearance of a lode. This mine has been fairly tried in depth, and to the west; but even the south lode has had nothing like a fair trial to the east, which the situation merits, considering the elvans before spoken of. If I mistake not, the ground, for 100 or 150 fms. between the workings and the elvans, has had no level driven through it, where, at least, it should have had three—one at 60, one at 80, and one at 100 fms. deep. Then the north lode, from its nearly parallel direction with the elvans, has, at least, 250 or 300 fms. from its workings to them; this ground to me appears to possess the greatest certainty of success, if tried in the manner I have mentioned, for trials on the south lode. There is plenty of length on both lodes to induce a belief, that as good a mine in it may yet be found as the one already worked.

This mine has been worked by a London company since the period I have named; but they, seeing the bottom poor, which was their object, got frightened, as they well might have been, and putting their whole dependence on the bottom, soon abandoned the undertaking, without making any trial beyond that of sinking a sump or two 10 or 20 fms.—so that I believe all the eastern ground remains, as I once saw it, a little before the shutting-up of the former working. I should, therefore, most earnestly recommend this matter to the consideration of miners. The putting-up two good steam-engines, and taking out the water to the 100 fathom level, and driving the levels as before named, appears to me to present more than ordinary chances of success; 20,000*l.*, under judicious management, will make the proposed trials. There is another nearly parallel lode with the Wheal Alfred main lode, which has been partially tried; but, for its depth, the trials are too near the elvans. I think this lode deserves further trial; but it should be made further west.

Having said thus much of the ground to the west of the elvans, forming the Laity Hill, brings me to a corresponding lode—if not the same—to the east, in the parish of Gwinear, called the Herland, North Herland, and Prince George Mines, about a mile to the east. The Herland Mine is on the great lode running through this district. The North Herland and Prince George, to the south, are on a number of small, but rich, parallel branches. The Herland Mine lode has been worked nearly 200 fms. deep; but the rich branches on either side have not been found worth working much below 100 fms. deep; the cross-course, formerly mentioned as yielding native silver, runs obliquely through this lode and branches. This run of mines, in a working previous to 1805, had yielded a return of 300,000*l.*, leaving some profit—I think I have been told 50,000*l.*; but of this I am not sure—the amount of returns I believe to be correct. These mines I think have been twice worked since the period I have named, making large returns, but have been abandoned by both companies with loss. The main lode to the east is now so far separated from the elvans before named, as not to be influenced by them in a mineral point of view; but will, if traced further east, about three-quarters of a mile, be found in a junction, with a channel of sandstone elvans running from Relistian to Trevaskis Mines. No trial has been made on this junction; but I think it well worth looking into. To the south-east of Herland, about half-a-mile, comes in Relistian Mine, on an extremely fine channel of sandstone elvans, but only slightly mineralised; this channel of elvans, about a mile to the northward, forms a junction with the iron elvans, near Trevaskis Mine—perhaps, a little to the north of it. Relistian Mines are on two parallel lodes, adjoining these elvans. A great deal of workings have been made on the north one for copper, and the south one for tin; and a large amount in returns has been made, and, I should think, leaving profits to the adventurers. About two miles to the south are the Crenver and Wheal Abraham Mines, bordering on, and are to the west of, the granite; a little further west are Wheal Treasury and Binner Downs Mines—all of which have been worked extensively, varying in depth from 150 to 250 fms.; and, on the whole, have been worked very profitably. I should estimate the returns from these mines, within the last 50 years, at least 3,000,000*l.*; but they are mostly idle at this time; still the country is a good one, and other lodes may be found, should proper trials be made. The lords of these mines have received fine incomes as royalty—indeed, I might say, many of them have received fortunes from them. I might say here, the lord and adventurers meet to consult for the mutual advantage of both with proper feelings; and, judging from the good understanding which exists between them, each must be convinced now nearly their interest is allied—the lord often making the adventurers and their agents handsome presents, as a pledge of their approval of the conduction of the mine, as well the honesty and straightforwardness in attentions paid in keeping the boundaries, and the separation of the minerals raised on and adjoining the boundaries. I have more than once heard adventurers, on quitting the mine with loss, express their obligations to lords for indulgencies in every way suited to their mutual interest. I could, not for my own interest, only wish that such feeling followed the mineral stratification where it goes into South and North Wales, the Isle of Man, Cumberland, Yorkshire and Derbyshire, and even north to Scotland, and west to Ireland; then, and then only, will the lords feel that pleasure in their mining tenants which is fairly bestowed on the tillers of the soil, and which their capital, skill, spirit, and enterprise so justly entitle them to. Mining, of all other sciences,

has the greatest number of unskilful persons connected with it—hence, combined with trickery, arises all, or the principal part of losses, so much complained of by the unwary.—A TRAVELLER: *Nov.* 22.

MINING IN CARDIGANSHIRE.

SIR,—Your able correspondent, "A Traveller," in the last Number of your valuable Journal, very well describes the mineral district and the mines of Cardiganshire; but, in so wide a field of inquiry, it is not reasonable to require that every particular should be minutely narrated, or that every item should be exactly accurate. In order to throw more light upon the subject, with your permission I will now go further into detail with respect to Cwmystwith Mine, with respect to which he is, in some measure, in error. By the side of the Cwmystwith main lode, generally called the Comet, there runs a broad channel of clay-slate, 30 fms. wide. The lode, which makes a base of 22 fms. in a perpendicular height of 15 fms., was, at one time, supposed to be cut off by this channel of ground, which appeared to be perpendicular, while the lode underlies southward. The ores that made the large profits in the last workings, were principally found in a bed formed in this soft ground, which bed I have seen yielding 16 tons to the fathom; and I have often seen 160*l.* worth of ore raised by the men stoping, at a cost of 3*l.*, in this flat of ore, which, for 60 fms. long, and 30 fms. wide, I have no doubt yielded 180,000*l.* worth of ore. So important was this bed of ore considered, that the lode was lost sight of; and it was supposed that the lode, instead of keeping its original underlie, had merged into the bed of ore, and come to an end. A 30 fm. level had been carried into this part of the work about 5 fms. deeper than the bed of ground; and, during the present working, a cross-cut has been driven to the point, where the lode was calculated to be if it held downwards. This trial has proved entirely successful—it cut the Comet lode where it was expected; and the last 15 fms. of driving on it have yielded 3 tons to the fathom; and this course of ore is going on in the western end still improving. What the length of this ore ground may be, is uncertain; in the level above, it was between 60 and 70 fms. long; and, if it should prove of the same length in the 30, the returns from this part of the mine alone will, in future, be from 180 to 200 tons a month, and the profits at least 6000*l.* a year. A new shaft has also gone into ore ground, which, for 30 fms. long, has yielded 2 tons to the fathom, or nearly so—of which there is a back of 30 fms. on the course of the lode now standing. There are also several other discoveries of value in the mine; and, instead of requiring a heavy capital, as your correspondent suggests, it is my opinion that, from this time forward, the mine will yield profits of 6000*l.* to 7000*l.* a year. The royalty, I admit, is high; but, from the small portion of the ore ground already laid open, 70 tons a month are being dressed, which, at a moderate price (say, 10*l.* a ton), will leave a profit of 2000*l.* a year.—CYMRO: *Goginan, Nov.* 23.

MINING IN CARDIGANSHIRE.

SIR,—In perusing the various letters and advertisements that appear in your Journal, one is struck by the temptations held out to embark small capitals, and to getting-up small companies, in preference to laying out a sufficient capital in extension of mines, whose previous progress to success, is, in some measure, a guarantee. The successful result of deep mining of late years ought to encourage a different spirit of investment. Permit me to point out to such of your readers as understand the French language, the merits of an article in the *Annales des Mines*, headed, "*Continuité en profondeur des Gites metallifereux*," and to recommend a translation of the greater part of it into your columns. After the perusal of this article, such a writer as "A Traveller," when he considers the enormous depth of the clay-slate that contains the silver-lead mines of Cardiganshire, will have reason to reflect before he measures their future wealth by what has been seen of them to their present comparatively shallow depths.

Nov. 23. CARDIGENSIS.

[We are obliged to our correspondent for directing attention to the article in the *Annales des Mines*, and of which we shall take an early opportunity of giving a translation.]

ADCOCK'S SPRAY PUMP.

SIR,—In last October Number of the *Edinburgh Review*, there is an article, headed "Holland—its Rural Industry and Drainage." The reviewer (p. 435) makes the following remarks, not, I think, irrelevant to the subject of the spray pump:—"Their many lakes and lakelets are swept over by an *unresisted wind*. Unlike the lakes of Goldsmith's *Traveller*, which slumber in the storm, their waters roughen, and fret and dash themselves against their feeble banks. The peaty soil gives way, the water flows on gladly, and two lakes become united into one. Another storm propels, *with greater force, the larger body of water*, and with double speed; a second barrier is overcome, until a third and fourth lake in succession are merged in one widening expanse." To this passage of the article in question there is the following note, which deserves, and will, no doubt, receive, the attentive consideration of all those who have hitherto remained sceptical as to the effects and powers of the spray pump:—"We can form, *à priori*, very little idea of the actual power of the wind in propelling bodies of water, and causing them to accumulate in its own direction. Smeaton states that, in a canal 4 *miles long, the water at the one end has been raised* 4 *in. higher than at the other*, by the blowing of the wind along the canal; and Rennell mentions that, *in a lake* 10 *miles broad, and* 6 *ft. deep, one side has been driven to the other by a strong wind in such volume, as to render it* 16 *ft. deep; while the windward side was laid entirely dry.*" R. J. BLEWITT.

Nov. 23.

THE SPRAY PUMP AT LLANHILLETH.

SIR,—I have attentively observed the progress of the discussion on the spray pump, detailed in your Journal, and have regretted that the merit, or demerit, of a scientific invention, should give rise to so much personal rancour. On looking over Mr. James Brown's first letter, which led to the controversy, I cannot fail to be struck with the fact that, in spite of the multitude of theoretical calculations and hypotheses, which have been brought to bear on the subject, not a single assertion has been disproved—not one statement controverted; on the contrary, Mr. Blewitt has himself come round to the opinion given in Mr. Brown's concluding sentence, "I do not believe it practicable to sink the pit in question to the coal until the spray pump is removed, and the ordinary system of the country introduced." Mr. Blewitt has gained but little credit with the public by this discussion. In his reply to the temperate letter, just quoted, he says—"The spray pump has been *eminently successful*—it is in daily operation at my pit, at Llanhilleth, and may be seen by any one who will take the trouble to visit the place;" and censures, in language, perhaps, too violent for a gentleman of his standing in society, the "anonymous scribbler," who dares deny this. In one month afterwards he says—"I am not inclined to recommend, nor do I recommend, the adoption of the spray pump for sinking." I certainly think Mr. Blewitt should have candour enough to acknowledge his error, and make Mr. Brown an open apology. The hon. Member would lose nothing in the opinion of the public by this concession. At Llanhilleth, as elsewhere, the spray pump has been abandoned. Mr. Adcock has now had trials in several pits. If the pump really possesses the merit he claims for it, why remove it? Theorising is not to the purpose—what practical men want is utility. Mr. Adcock proves clearly enough, to his own satisfaction, that the spray pump has answered at Llanhilleth. Mr. Blewitt, after a large expenditure, is reluctantly obliged to confess that it has not, and resumes the old method. How many more trials does Mr. Adcock require? Even if the intelligent "C. E.," who, prompted by "*Christian feeling*," writes, to propose a subscription, in your last week's paper, were to raise the amount required for a new experiment, what guarantee have we that the result will be other than what has already taken place? We have no other premises to reason upon, and the past is anything but encouraging.

Mr. Mushet is somewhat unintelligible as to his "fixed discount," "not augmenting with the increased depth of the shaft." Can Mr. Mushet inform us at what depth the loss from friction ceases?—or, whether it is one of the laws of hydraulics, that the friction of a moving fluid is equal to a constant quantity, whatever the space passed over? I will venture to say, Mr. Mushet knows infinitely less of pumps and pumping, than this same Mr. James Brown, whom he states to be "deficient in his understanding of the forces employed"—at the same time, proving no fact, bringing forward no instance in support of his statement, but making the broad assertion gratuitously, because it suits his purpose. Previous to the laying down of the spray pump, at Llanhilleth, its place was supplied by a 12-in. lifting pump, 6-ft. stroke, depth of pit, 25 yards; the water was kept down by the pump, working 10 strokes per minute. This I take from Mr. Blewitt's letter. We will put the matter in as simple a form as possible. In every 10 ft. in length of the pipe are 7854 ozs., or 490$\frac{1}{16}$ lbs. × depth of pit, 75 ft. ÷ 10 = 7·5 × effect in space passed through by bucket per minute, 60 ft. = 68 H.P. nearly!—no allowance being made for slip of water in passing clack, &c., which would reduce the estimate of quantity considerably lower. Such was the power required under the old system. To replace this, Mr. Adcock has been at much trouble to prove, that the spray pump exerted a power of 30 horses—that such, and a still greater, power was expended, I have no doubt, but certainly not with a proportionately useful effect. It is little to the credit of the invention, that it wastes upon the inverted cone at top, sufficient power to throw the water 100 ft. higher. The proposed coning of the pipes will only partially prevent this, and can be carried but to a very limited extent; there must always be an enormous loss from this cause. During the time the spray pump worked at Llanhilleth, the average pressure on the boilers was 40 lbs. to the inch—tubular boilers, 35 ft. long, 6 ft. diameter, or thereabouts—and the steam was NOT wire-drawn through the throttle-valve, to the extent stated by Mr. Adcock. Before the introduction of the spray pump, the engine was easily worked to her speed, of 30 strokes per minute, with one boiler—after, it was only by the quickest firing, that the stoker was able to keep her going, at very reduced speed, with two, when the third required cleaning, the throttle-valve being fully opened. This I learned from the engineer; and, in my mind, it sets at rest the question of wire-drawing the steam. I have not the exact area of heating surface to each of these boilers—perhaps, Mr. Adcock is better informed, and will compute thence the number of cubic feet of water evaporated per hour, under a pressure of 40 lbs. to the inch. We shall thus be able to draw a comparison between the water raised, and the steam used in raising it, in the old and the new systems respectively. Not a single yard of the [redacted] was sunk for upwards of three months after the invention was advertised as PERFECTED and EMINENTLY SUCCESSFUL. These facts are notorious. Whoever takes the trouble to inquire, will find my statements to be strictly correct. All practical men in this district look on Llanhilleth as a grand emporium of mechanical tinkering—from beginning to end, there has been but one series of blunders. The spray pump is an invention of much ingenuity; and, if we had no better method, might, I doubt not, be made to answer the object in view. But it is asking too much of a generous public, to expect patronage for every mushroom invention which springs up, merely because it is new, when the old method answers the purpose better. Clacks and valves will be used when this spray pump is forgotten.—HENRY WILLIAMS: *Pontypool, Nov.* 15.

COMMUNICATION BETWEEN GUARDS AND ENGINE-DRIVERS.

SIR,—In your Journal of Saturday last, there appears a letter from Mr. Allen, in which he infers, that our mode of communication between the guards and engine-drivers was borrowed from suggestions given by him, at the meeting of Mechanical Engineers, at Birmingham, on the 27th Oct.; but, if you will do us the favour to refer to our pamphlet (which you did us the honour to review in your paper of the 25th September), you will find, in pages 23 and 24, a full description of our arrangements.

London, Nov. 26. BRETT & LITTLE.

[On referring to the pamphlet, we find, as Messrs. Brett & Little state, a full description of their arrangements, which at once settles their prior claim. We have not space in our present Number, or we would give the quotation.]

IMPROVEMENTS IN THE CONSTRUCTION OF LIGHTHOUSES.

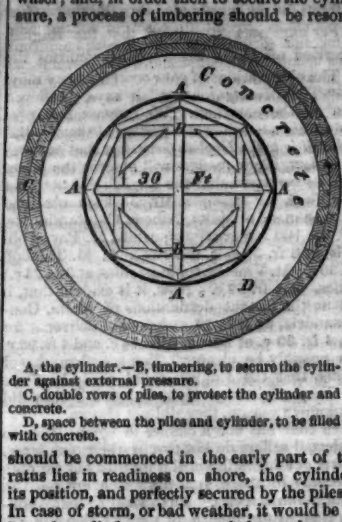
SIR,—As the columns of your Journal are, at all times, open to suggestions, in any way calculated to promote the general interests of this great country, and to protect the lives and properties of persons employed in hazardous undertakings, whether mining, railway, or navigation, I beg to hand you a description of an improved method of constructing lighthouses, which, I trust, may be deemed worthy the attention of your readers, especially as the subject on which it treats so greatly tends to the promotion of our national wealth, and so closely connected, or, rather forms the main link of the great chain of civilisation. While it is obvious, that every means should be used to facilitate the workings of the great branches of industry referred to, the numerous and fearful shipwrecks, which are continually occurring on our coast, are sufficiently cogent to assure us, that our coast is not sufficiently lighted, to warn the enterprising mariner of his danger in time to prevent accident. The vast amount of shipping to, and from, our ports, and the yearly increase of the British commerce, both by sea and land, calls upon the Legislation of the British empire for a more improved system of lighthouses. From the efficient state of our steam-ships, we are no longer dependent on the winds and tides for an intercourse with our colonies, and other nations, but access to all parts of the globe is now perfectly easy. Much remains to be done at home, to render the approaches to our ports more distinct; but so long as the Godwin Sands, and other such places, remain unlighted, life and property must be considered in danger. Sir, with your permission, I shall call the attention of your scientific readers—and, more especially, the elder brethren of the Trinity House—to the means by which a substantial foundation for lighthouses, on all such dangerous places, might be effected at a moderate expense, and without any risk. The system I propose is by no means of a novel description, but has been long in extensive use for sinking operations in the mining districts, to effect a passage through running sands.

It is well known that, in shaft sinking, running sands of the most formidable nature have presented themselves to the miners, who, on making the discovery, immediately resorts to what he terms a sinking tube—the size of the shaft, including the brickwork. The tube, or cylinder, is, in most cases, made of wood; and, when placed in the required position, is weighted with brickwork, and so forced through the sand; and, by these means, the brickwork casing is effected. But as this system is so practically understood among your mining readers generally, a detailed account of the operation would be useless. It is evident that, if by means of a cylinder, a passage can be effected through the running sands in a shaft, the same means could be used on the Godwin Sands, and other dangerous spots, with the same success.

From the many inquiries I have made respecting the depth on the Godwin Sands, I believe they are not more than 30 ft. thick—at the bottom of which is the chalk formation. If we can by any means get to the chalk, we have at once a foundation for the lighthouse, which would resist every storm. I should propose to construct a wrought-iron cylinder (say) three-eighths of an inch; boiler (plate-iron) of 30-ft. diameter, which would give a sufficient base for a lighthouse of 120 ft. above high water mark. Such a light would be seen at a suitable distance. The cylinder should be made into sections of 4 ft. in length, and should be fitted up on shore with the greatest care. A stage could be made on piles, driven into the sand, and the whole well braced together. Having adjusted the preliminary arrangements, 16 ft. of the cylinder could be put together, suspended between four lighters; and then, by the aid of a small steamer, could be towed into its intended position, and there lowered into the sands. Having fixed and secured the first portion of the cylinder to low water mark, the remaining sections could be floated off in the same manner. The joints being previously prepared, each section could be screwed together, and sunk to the required depth, in a short time. In case it was found that the cylinder had not sunk to the required depth, I should resort to Dr. Potts's atmospheric pile-driving system (already described in your Journal), by which means the cylinder could be forced down to the required depth. The next plan of operation would be to drive the external piles, as shown in the annexed diagram.

A, A, A, concrete. B, B, cylinder.
C, stone work, inside the cylinder.
E, E, double rows of piles, for the protection of the cylinder.
F, chalk formation.
c, c, wood planking inserted between the flanges, to reduce the friction in sinking the cylinder.

The piles should also be driven by Dr. Potts's system, and the whole well braced together.—When the pile driving is completed, the sand between the cylinder, and the piles, A, A, should be taken out as deep as possible, with the bag and spoon apparatus; the space thus excavated should be immediately refilled with the best concrete, which would entirely protect the foundation against every storm. The cylinder being so far perfectly secured, a few ship pumps could be fixed inside to pump out the water; and, in order then to secure the cylinder against the external pressure, a process of timbering should be resorted to, as shown in diagram.



A, the cylinder.—B, timbering, to secure the cylinder against external pressure.
C, double rows of piles, to protect the cylinder and concrete.
D, space between the piles and cylinder, to be filled with concrete.

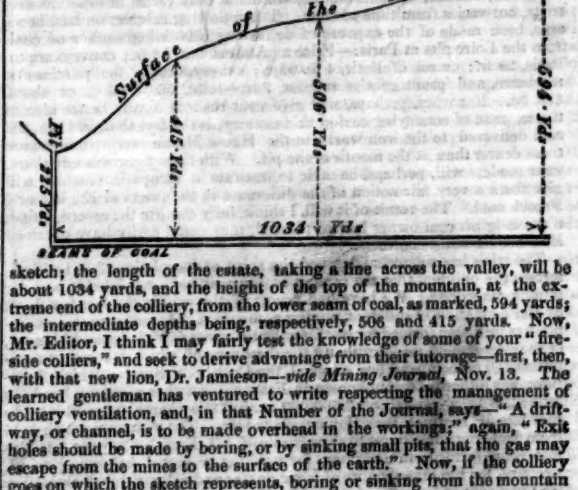
After having pumped out the water, and well secured the cylinder against the external pressure, the sand inside the cylinder could be taken out, and the same process of timbering repeated every 5 feet, until the whole of the sand is excavated to the chalk formation; the sand being excavated, the concrete foundation for the lighthouse should be put in without delay, as shown at A, *Fig.* 1. The concrete being set in one mass, the stone-work, C, could be commenced; and, as the stone-work rises inside the cylinder, the timber could be taken out. The stone-work should be of the strongest construction, and every block well bound together.

All works of this nature should be commenced in the early part of the spring. While the apparatus lies in readiness on shore, the cylinder could be quickly sunk into its position, and perfectly secured by the piles and concrete in a few months. In case of storm, or bad weather, it would be only requisite to let the water into the cylinder, to counter-balance the external pressure of the waves, and which could be easily removed, when the storm had abated. This plan of effecting a firm foundation for lighthouses is not only applicable to the Godwin Sands, but can be extended to all bars of rivers, and other places, where a light is required to warn the mariner of danger.

Fleet-street, London, Nov. 24. GEORGE SHEPHERD, C.E.

PRACTICAL MINING—MR. DEAKIN AND DR. JAMIESON.

SIR,—I was lately consulted by a company of gentlemen for my opinion respecting a new colliery they were about opening—it is maiden ground, and situated in the bottom of a deep valley, between two high mountains, the depth of the pit being 225 yards, as marked in the accompanying



sketch; the length of the estate, taking a line across the valley, will be about 1034 yards, and the height of the top of the mountain, at the extreme end of the colliery, from the lower seam of coal, as marked, 594 yards; the intermediate depths being, respectively, 506 and 415 yards. Now, Mr. Editor, I think I may fairly test the knowledge of some of your "fire-side colliers," and seek to derive advantage from their tutorage—first, then, with that new lion, Dr. Jamieson—*vide Mining Journal*, Nov. 13. The learned gentleman has ventured to write respecting the management of colliery ventilation, and, in that Number of the Journal, says—"A drift-way, or channel, is to be made overhead in the workings;" again, "Exit holes should be made by boring, or by sinking small pits, that the gas may escape from the mines to the surface of the earth." Now, if the colliery goes on which the sketch represents, boring or sinking from the mountain top to the coals will be a formidable operation, and a bored hole would be full of water, going down into the colliery out of a rock 100 yards in thickness, of which the top is composed—so full of water, indeed, would the bore-hole be, that no gas could ascend through it from the colliery. Concerning the drift, or channel, in the roof of the mine, I do not exactly understand the purport of Dr. Jamieson's remarks—will the learned professor, therefore, please show upon the sketch, how he would manage such work—that is, his drift, or channel, in the roof of the mine; and also, I should wish him to take into consideration, how the two seams of coal are situated with regard to each other, not more than from 4 to 5 yards apart, both being equally valuable seams of coal. I think the upper one should be worked first; as, if the lower one were worked, the upper would be much damaged by the lower being taken from under it—the lower being the most fiery seam of coal, where, and how, is the drift, or channel, to be made in it? Beneath the goaf, or waste, of the upper one?—that being all worked before the under one is touched. I can better understand the learned doctor, if he will be kind enough to mark the hand sketch I have appended, than by a volume of writing, or lectures—a plan of things of this sort is more suitable to the comprehension of practical men, and I hope he will not fail in supplying it.—THOMAS DEAKIN: *Blaenavon, Nov* 22.

ON THE VENTILATION OF COAL MINES.

SIR,—I have read, with attention, the letters of your various correspondents, on the ventilation of coal mines, inserted in your Journal lately; and, although I do not expect to advance anything striking or new on the subject, yet hope that the following remarks may be thought worthy of a place in your columns, and may, perhaps, tend to elicit observations of greater value from others. It is to be regretted, that in discussions of this kind, there is so much of a sneering and ridiculing tone, adopted by several of your correspondents, towards those who do not at once accord with their views—a mutual, good-tempered, interchange of ideas is, surely, much more preferable; and those who broach new inventions ought not to feel offended at observations from parties of practical experience, as they may, by directing attention to the faulty points of the invention, lead to their improvement or removal, if such can be effected. The question at issue is, whether the Newcastle system of ventilation has been improved upon by any of the proposed new methods; as the most prominent of the latter may be mentioned those of Mr. Ryan, Messrs. Faraday and Lyell, and Mr. Sweetlove. Of Mr. Ryan's method I can say nothing, as it appears to be completely obsolete; and the two latter systems are so similar to each other, that any remarks made, will apply equally well to both. The system proposed then is, in a few words, to carry a large pipe down the upcast shaft, to connect smaller pipes therewith, ramifying to the various places where gas accumulates, and at the top of the main pipe to place an air-pump, or other means of extracting the air, &c., filling the interior of the pipes. Now, however simple this plan may appear upon paper, it would be found a very different matter to carry out in practice. The pipes, of course, could be laid, and the air-pump, or other apparatus, put in operation, but how long would they continue in working order? In the vicinity of "goaves," which are the great receptacles of gas, and where the coal is all extracted, the weight of the superincumbent strata, causes continual heavings of the floor, and falls from the roof. A very short time would, in such a case, be sufficient, to render the whole arrangement useless—in fact, from the above causes, the system of pipes, working properly, could not be depended on for a single moment. Of ventilating the "whole" workings by this method, nothing has been said, although the above causes would not there militate so powerfully against it. But let any one, conversant with the great extent of workings in a large colliery, think on the *miles* of pipes necessary to ventilate the mine as proposed, and then contrasting this system with the present one in use, form their own opinion of its merits. Again, the great body of gas evolved in a fiery colliery does not generally proceed from fissures, but exudes from the entire surface of coal laid open in working. How is it possible, then, to gather all the gas into pipes, so as to prevent it from coming into contact, with the air passing through the mine? The proposed method of piping is simply a modification of the present method, contracting the return airways within the narrow limits of a pipe, and substituting the air-pump for the underground furnace. Until this is proved to be an improvement, coal pro-

prietors and agents ought certainly not to be ridiculed for adhering to the old mode. If it be impossible, then, to prevent the gas from mixing with the atmospheric air in the mine, and so rendering it explosive, could not a light from electricity or other means be invented and made portable, so as to be used with impunity in an explosive mixture? The Newcastle method is certainly liable to objection, or there would not be so many appalling accidents happening in the district; but, until a safer method be brought forward, it must continue to be practised. Let, therefore, a careful and every-day vigilance be exercised in carrying it out—let the method be simplified as much as possible—divide the workings of the mine into districts, with a distinct split or portion of air for each; and, from the reduced friction of short air-courses, a larger quantity of air will pass through the mine—reduce the number of air doors to the minimum, by adopting air crossings, wherever it can be done, and so lessen the risk attendant upon their mismanagement—let the airways and shafts be of as large an area as can be effected—and let the "pillar" and "whole" workings be carried on in *distinct* districts, so as not to bring candles into close proximity with the "goaves." More explosions, in my opinion, could be traced to the last-named system of working, than is generally believed. The adoption of these precautions, with the aid of powerful underground air-furnaces, is, I doubt, all that can be done at present to prevent accidents. Let us hope that some more efficient mode may be devised.

Nantyglo, Nov. 17. A Newcastle Collier.

DRAINAGE AND VENTILATION OF COAL MINES.

Sir,—As the subject of colliery ventilation is again creating a feeling for improvement by your mining correspondents, I hope you will excuse my trespassing upon your columns so often, as it is with no other motive than to award merit where merit is due, and to elicit facts. Albeit, Mr. Sweetlove's motives are genuine, and entertained with a view to the miners ultimate benefit; but, why claim priority to the separate withdrawal from the mine of hydrogen gas, when that principle was propounded by the late Mr. James Ryan, and practised by him 40 years ago. I would recommend that, before any party sets up priority, to make himself acquainted with what his ancestors have accomplished. Mr. Sweetlove, it appears, proposes to effect that by piping which Mr. Ryan effected by a "head" or drift. Now, I would wish to ask Mr. Sweetlove in what way he would affix his piping, so as to prevent the roof breaking down, the sides heaving out, or the floor of the mine from uplifting, thereby causing a separation or breakage of the pipes. He will, perhaps, remember that the moment an excavation is made into the solid coal, decomposition takes place, and continues to do so as long as any air is admitted therein, causing the sides and roof to dissever, and not unfrequently to stop the passage; and I could show Mr. Sweetlove an instance where more than 80 tons of coal have fallen instantaneously from the roof, in a passage or gateway, completely stopping it, until drawn out; but I would add, what would have been its effects upon a system of piping, as the rails laid in such passage are, as a matter of consequence, broken to atoms. It is from the difficulty of even carrying a small air-tight passage in the solid coal in the immediate vicinity of other works of a great magnitude, that I feel convinced that a system of piping is wholly impracticable. A head, or drift, of 2 ft. 3 in. square would be carried at less expense per yard than that of 3-inch cast-iron piping, want less repairs, less attention, and more than 100 times the area. If a separate removal of the gas from the mine be contemplated, why need suffer it to accumulate? Why not take steps, in the first instance, to carry it off, as generated by such preliminary works as would cut off the communication from whence the gas is derived, and the works in progress.

But, Sir, what an age this is to live in. A veteran, but the other day, bid us a lasting farewell, who, for 79 years, traversed this contumelious world, advocating a principle based upon acute and refined observations—one who thought nothing of spending his last penny, in order to attend the after-scene of those dreadful slaughters—which it has been your painful duty to record through your columns—there advocate his principle, and console himself, by being ordered out of the room, and treated under the significant terms of "Viscount Sulphur," the "Old Irishman," and 50 other cognomens; and who died, comparatively speaking, in misery and poverty. Now that he is called before a Higher Tribunal than the Society of Arts, from whom he received their gold medal, *his* system of the drainage of coal mines is "promulgated" by other men, who endeavour, with their advocates, to call it their own. I would give one word of advice to those parties who have condemned Ryan's principle, to first of all make themselves thoroughly acquainted with it; and if they are at a loss for any information, so as to judge of it impartially, I shall feel it my duty to render it, as far as I can, having the whole of his papers and correspondence in my possession—some portion of which points out too truly the many shifts men of science are often put to; and, alas! the treatment they too generally meet with—their only consolation being, that they have lived for the public's benefit only, and not for their own, or that of their families.

As to Mr. Deakin's request of last week, desiring to know which way the gas creeps through the pores of the coal, "up or down," not wishing to indulge in criticism, I would simply add *up*—but if under pressure, as caused by water lying above, it may possibly descend, and approach a highly-compressed medium, when, if liberated, exudes with great violence, causing a whistling, or singing noise, and, not unfrequently, producing water bubbles at the point of emission; and, if ignited, detonates with great violence, in proportion to the degree of compressibility sustained. I must also confess, that I never saw a coal seam with every pore full of water, and doubt very much whether Mr. Deakin ever did—but the porosity of coal being such a complication of net-work, that there is a possibility of there being a road for the gas as well as water. If Mr. Deakin will take a rib of coal—say 200 or 2000 yards through it, without any interruption, rising (say) 3 in. in the yard, and sever it by a drift in the extreme crop, running at right angles with the line of dip, and also sever it in the deep at right angles with the line of dip—exhaust the crop drift by artificial rarefaction, to (say) ½ lb. to the foot, taking care to connect such drift with an upcast shaft, which done, commence to get the rib of 200 yards, or other dimensions, out; and then tell the readers of the *Mining Journal* whether he found any gas during his progress. Hibernia.

Dudley, Nov. 23.

[Advertisement.]

MANUFACTURE OF IRON AND STEEL.—Mr. RADLEY & Mr. MUSHET.

Sir,—With my letter, in your Journal of the 13th, I had proposed to myself to terminate the nonsensical scribbling to which Mr. R. Mushet seems so prone, and to which his genius is so apt, had that gentleman answered that letter as plainly as my inquiry was put; but, falling in the desired information, I trust you will afford me a brief space to recall his wandering perceptions. An Italian proverb runs somehow so—"*La Gallina che schiamazza, egli fa l'Uovo*," which forms an excellent expletive to Mr. Mushet's rigmarole about Timbuctoo, &c.; and, as "Solomon" says—"Out of the abundance of wisdom the heart speaketh;" and Mr. Mushet seems so conversant with the particular practices of Europeans with the "yokels" of Timbuctoo, and is an iron, or steel, maker withall, the English of my Italian proverb—"the hen that cackles has laid the egg"—will suit him very well. If Mr. Mushet will refer to my article of inquiry, he will see that my language is too precise to admit of an excuse for his pedantic display of unsought-for particulars about the carbonaceous constitution of coal, and that "can a ton of iron be obtained by the use of 25 cwts. of *best coal* as fuel?" does not admit a question of coke, whether fossil or artificial. Then, again, he doesnot answer my inquiry about the source whence he drew the idea that I had some notions about making steel—to say nothing about the method of it. And here permit me to ask of him the question, plainly and personally—Did Mr. Mushet obtain his information respecting myself, and the fabrication of steel, from Sir Thomas Buckler Lethbridge, Bart., of Sandhill Park, Somerset? And have not my confidential communications to the said Baronet on steel fabrication been about as dishonourably entrusted (confidentially, of course) to Mr. Mushet, as Mr. Mushet's, on blast-heating and furnace construction, have been by Sir Thomas to Mr. Radley?

I know, from other sources than the *Mining Journal*, that Sir Thomas Lethbridge's *sacred pledges*, both in writing and *viva voce* expression, that the privities should be scrupulously kept in this regard, and not divulged by "him or his," have been recklessly and dishonorably broken. The scientific facts, detailed by myself to Sir Thomas B. Lethbridge, at his own particular instance, and in his own house, at Sandhill Park, on the 13th, 14th, and 15th of October last past, as matters of sacred confidence, and to carry which into operation, at Laxboro', the site of the intended Lothbroke Iron and Steel Works, I have been appointed, by written and duly-executed agreement, the engineer, have been committed to the care and promiscuous knowledge of several parties—amongst whom figures Mr. Robert Mushet, of Coleford, who has the effrontery to twit me with the gist of a (if he so wills it) confidential communication from the Baronet to himself; and, in the next breath, launches forth his anathema against me for having hinted at a similar fact, with infinitely more delicacy as an iconograph. *Proh pudor!* Mr. Mushet! and thrice *proh pudor!* Sir Thomas B. Lethbridge, Bart.!

One of the most rational expressions of the late William Cobbett was, "that if we comprehend the meaning of a word or sentence, it is puerile to quarrel with the method of its enunciation;" and I cannot see why such words as "iconograph," or "evolve," should be repeated in italics. Where did Mr. Mushet ever see any coal containing 98 per cent. of coke? And as to Mr. Mushet's sneering mode of expression, when speaking of me, I feel sorry, that any man with pretence to real science, should use such mountebank expressions as "feat of metallurgical skill," when my relation was not that of a feat, but of a simple and unassuming corroboration. But, should I succeed in those processes now in hand, I shall accomplish "that feat" to which none of the Mushets were ever adequate. We are told, that the late Mr. Mushet made steel and soft iron (by smelting, of course) in an air-furnace, in 1804; and also, that Mr. R. Mushet, his son, in producing the same effect at a later date, was content to tread in the footsteps of his metallurgic predecessor. Neither of the two succeeded, because as nothing is known in daily practice of their processes—and had such been commercially practicable, they would have been made available long since—we are to conclude, that the capability of making iron *to profit* did not form a quality of these processes. "*Eh bien! M. Radley, est maître ch ez tout les deux*," because he can make marketable iron and steel *to profit*, by other methods than those now practised. I am prepared to prove, to any one disposed to take a patent before the exposition of the method, that I can make 15 cwts. of Welsh best furnace coal perform the same duty in smelting any iron ore, as 46 cwts., assumed as a minimum, do now by ordinary processes. And I am also prepared to prove, that, with any of the hematites as ore, I can produce 1 ton of forge blooms with the use of 32 cwts. of the same coal, at an average. Mr. Mushet confesses that he touches my remarks rudely; but he is mistaken in his notion, that making steel is my "darling hobby;" and I advise him to betake himself to school again, to learn that the word "but," by its redundancy, makes nonsense of his sentence about the marketable nature of Timbuctoo steel.

When Mr. Mushet says—"With a well-constructed furnace, and a proper regulation and distribution of the blast," &c., does he mean such a furnace as is set forth in the drawing I saw at Sandhill Park, with flues located behind the fire-brick lining to heat the blast? Surely, this is not what he means by such expressions. But, as I find myself trifling with your valuable space, I shall conclude by repeating the questions—Has not Sir Thomas B. Lethbridge, Bart., of Sandhill Park, Somerset, made a literal communication to Mr. R. Mushet, of Coleford, on the subject of Mr. Radley's method of making iron and steel? And was not such letter of a date subsequent to the 8th October, 1847? And did not Mr. R. Mushet reply, in terms to the Baronet, that "such was not feasible in practice," or tantamount thereto?

With regard to the letter from Sir Thomas, disclaiming all knowledge of, and connection with me, I shall respond thereto next week, by the publication of a summary of "an agreement," and other documents, in the Baronet's *autograph*, and signed by him, offering to me the situation and appointing me *his* engineer to the Lothbroke Iron [illegible], for three years certain, at a weekly salary. Wm. Radley.

Barnsbury-park, London, Nov. 29.

P.S.—I cannot permit the occasion to pass without noticing the *petit mot* cast by Mr. D. Mushet, and expressing my opinion, that, should the intention of the inquiry thereby made, be of a nature such as I opine, then, I say, that there is more [illegible] of useful thought and incubration in that gentleman's brain than in all the [illegible] like besides put together; and that the fitting reply to that inquiry will be a [illegible] for Mr. Adcock and his froth machine, in conjunction with the genius of his own [illegible] section of the "Descent of the Blowing Piston."

ACCIDENTS.

Yorkshire.—Fatal Quarry Accident.—On Tuesday last, a man, named Ibbetson, was dashed to pieces by falling into a stone quarry, about 12 yards deep, at Potternewton, near Leeds, where he was employed as a workman by Mr. J. B. Lucas. He was lowering the tub, or box, in which the wall-stones are drawn up from the quarry, and, whilst adjusting the crane, he fell in. He has left a widow and large family to lament his loss.

Brancepeth Colliery.—As J. Stoker, deputy-overman, was removing a pit prop (contrary to the advice of another overman), a stone fell upon him, and he was killed.

Shut End, Wolverhampton.—As R. Lord was stooping to pick up a crow-bar, about four or five tons of coal fell upon him, and, when taken from under it, he was quite dead. The pit, which is the property of Messrs. Cocksey & Fellows, was stated to be properly worked and timbered, and the coal fell in consequence of two faulty places, or veins, in the coal, which could not be seen before the coal was down.

Oak Farm Iron-Works.—W. Cannon, while cleaning some pinions belonging to an iron mill, was drawn through the boxes between the pinions and the rolls. There was a deep wound over his right eye—his left leg was almost severed from his body, and his bowels were squeezed out. It was supposed that his apron, or some part of his clothes, became entangled in the boxes, which caused him to be drawn in and thus crushed to death.

Cwm Avon.—On Thursday last, a collier, named Jones, was engaged in one of the levels belonging to the Governor and Company of Copper Miners, at Cwm Avon, when a quantity of earth fell, in forming a hollow, in which he became quite entombed. He remained in his subterranean cell for five or six hours—all his cries and prayers failing to bring any person to his assistance. Eventually, some of his fellow-workmen, who heard his lamentations, came and rescued him from his uncomfortable and somewhat perilous situation.—*Swansea Herald.*

Clay-Cross.—A few days ago, J. Green, lost one, if not both, of his eyes, by an explosion of gunpowder, in a pit at the Clay-Cross Colliery. He was setting a blast, when the drill, with which he was ramming, came in contact with some hard substance, which immediately struck fire, and caused the explosion.

Accident at Ripley.—S. Stocks was killed in an ironstone pit: it appeared he had filled a box at the bottom of the shaft with bind, which was being drawn out by a chain, when, reaching near the top, one of the links of the chain (which was nearly new), broke, and the box and contents fell down the shaft, and struck the head of the deceased with great violence, which caused instant death.—*Derby Reporter.*

Death from the Explosion of a Boiler.—As T. Kidson, a labourer, employed by Messrs G. B. Thorneycroft and Co., at their iron-works, at Bradley, was employed piling iron in the furnace, the boiler burst, and the deceased immediately afterwards was found lying under the wall of an adjoining boiler, badly scalded and burnt, and partially covered with red-hot bricks. Assistance was promptly rendered, and the deceased conveyed home and attended; he lingered until the following Sunday morning, when he died from the effects of the burns and scalds. On examining the boiler, the state of which was minutely inquired into, the bottom was found to have burst from the top, round the crest plates. It was an old boiler, but had undergone a thorough repair three or four months ago, and the plates, at the thinnest part, were full 3-16ths of an inch thick; the valves were found in good working order, and there appeared a sufficient quantity of water in at the time of the explosion. The boiler had been cleaned on the morning of the occurrence, and the main lid screwed on about an hour before the explosion. Fire had been put under the boiler about three-quarters of an hour before the lid was screwed down—the boiler being filled with water at that time. No cause could be assigned for the explosion; nor was blame attributed to the man who had the care of the engine, who was also much injured.—*Wolverhampton Chronicle.*

Mineral Resources of South Wales.—In an inquiry instituted before the High Sheriff, to discover the value of some property in the parish of Llanwonno, required for an extension of the South Wales Railway, the chief point urged in favour of Mr. Vaughan, the owner of the land, was, that the taking it would destroy his privilege as owner of the keys to the two valleys, as the establishment of the railway would have the effect of throwing open those districts. A witness, named Joseph, estimated that in Rhondda Fawr Valley there were 375,000,000 tons of available minerals; and in Rhondda Fach 194,000,000; he also added, that the *mineral resources of Monmouthshire were speedily becoming exhausted*, a circumstance which would render it necessary that the products of the two Rhonddas should at no distant day be taken into the market, thereby enhancing the value of the "way-leave" privilege of Mr. Edwards Vaughan. The loss of this privilege, for conveyance of minerals from the Rhondda Fach Valley, witness estimated at 2081*l.*; and with reference to the Rhondda Fawr Valley, the estimate was about 2843*l.* In his cross-examination, he said this valuation was based upon the principle that Mr. Edwards Vaughan should be dealt with differently from any other landowner in the valley; but then, he added, that that gentleman's position was different, as there was only one feasible mode of bringing the minerals of the two Rhonddas down—namely, by passing over his property.—Sir Thomas Phillips cross-examined the various witnesses at some length; and in an able reply, the arguments of Sergeant Kinglake (for the plaintiff), were noticed in detail; and also the discrepancies in the valuations set up by the respective witnesses. It was contended, if the claim for "way-leave compensation" should be granted, it would effectually stop all further railway extension in the Rhondda Valleys, the minerals of which would have to remain unworked. At the close of the evidence, the learned Coroner having briefly, but most clearly, summed up the evidence, the room was cleared, after which the jury proceeded with their deliberations. In the course of about half an hour they returned a verdict for Mr. Edwards Vaughan—damages, 300*l.*—viz.: value of the land, 225*l.*; severance and general damages, 75*l.*—in all 300*l.*

Cwmavon Works.—On Tuesday, the 16th inst., a new mill, called the "Great Western," was started, for the first time, at these large and rapidly extending works, which bid fair to outrival most of the Welsh iron-works, in superior arrangements, and in the superiority of its magnificent workshops, machinery, and manufactured produce. This mill is the sixth that has been erected within the space of two years, and is calculated to manufacture the produce of 40 puddling furnaces, and will make the total number erected within the time mentioned to be 68 puddling, and 20 balling, furnaces, which will be all in full operation before New Year's Day. Within the same time 500 comfortable and commodious cottages have been built for the workmen; and the secluded valley, which until of late years contained only a few scattered rows of houses on the hill sides, is now teeming with a population of 5000 persons—every week adding to their number. These extensive works, which comprise iron, copper, tin, and chemical works, are under the able and judicious management of T. R. Guppy, Esq.; and the astonishing amount of work done, and of alterations and improvements made, within the last two years in this valley, bear ample testimony to his scientific skill and to his energetic and persevering industry. The "Great Western Mill" was commenced in July last, and has been completed in four months. The engine is small, but powerful, double cylinder, 20-inch diameter each, and 2 ft. stroke, and is intended to drive four pair of rolls. It started well, and it was surprising to see so small a machine drive the ponderous wheels and rolls with such power and velocity. The whole of the mills are under the superintendence of that old and experienced mill manager, Mr. Nathaniel Evans, late of the Dowlais Iron-Works. The severe pressure in the money market, and the consequent stagnation of trade, has thrown a gloom over the present prospects of the iron trade, and a reduction of wages is, therefore, contemplated at these works, and must necessarily take place; but it is consoling to reflect, that they will give employment to thousands during the ensuing winter, that would otherwise have to roam far and wide to seek employment, and to keep themselves and families from starvation.—*Merthyr Guardian.*

Risca Coal-Works.—We understand that the Risca works have been disposed of, and they have fetched upwards of 100,000*l.*—*Worcester Chronicle.*

Probable Dissolution of the Colliers' Union.—Much dissatisfaction and disunion at present exists in this once formidable body. The complaints are loud, the salary of the "Attorney-general" is too great, and that he must consent to a considerable reduction, or abandon his post. He, in turn, claims arrears (it is so reported) amounting to 1500*l.* Many collieries are entirely stopped, and several others are, we are told, on the point of stopping, and discharging their men. The funds of the union are almost exhausted, and the present subscriptions very scanty; and, with these prospects, in the face of large stocks of coal on every pit brow, Mr. Roberts's chance of payment of arrears is very poor; and the union, minus both leader and funds, must, of necessity, be at an end. The poor colliers themselves will, it is feared (should the coal proprietors close their works on a more extended scale), be in great distress; for they have no money wherewith to relieve any considerable number of sick or unemployed, the whole of the heavy subscriptions having been swallowed to pay the union expenses, the charges of delegates, and the large salary of their chief.—*Liverpool Mercury.*

THE COST-BOOK SYSTEM.

Vice-Chancellor's Court, before Sir J. Wigram, November 20.

Curling v. Flight.—The further arguments in this case were resumed, upon the question, whether the purchaser of shares in a mining adventure in Wales and Cornwall was entitled to further evidence of title than was afforded by a book known among miners as the "cost-book," the purchaser contending that the shares conferred an interest in land. The case has been already noticed by us in the *Mining Journal* of Saturday last.

Mr. Tillotson (who was with Mr. Wood), on the part of the vendor of the shares, referred to a case before the Master of the Rolls, in which the question arose, whether shares in the Liverpool and Manchester Gas Light Company and the Allington Dock Company were to be considered as giving an interest in land, within the statutes of Mortmain. The shares in the former companies were expressly declared to be personal estate, but as to the Dock Company shares the Master of the Rolls observed, "A shareholder in one of the companies, whether incorporated or not, had a right to receive dividends due upon his shares—that is, his right to a proportion of the profits arising from the employment of the joint-stock; but, whilst he continues to hold his shares, he has no distinct or separate right to the land, or any part of it. He has an interest in the enjoyment of the land, but he cannot make any part of it his own, in satisfaction of his claims as a shareholder. He is not in the situation of a mortgagee, who has a legal interest in the land, nor as tenant in common, nor as joint tenant." All the authorities showed that shares in a joint-stock partnership, similar to this mining partnership, were merely personal and not real estate.

The Vice-Chancellor observed, that the difficulty in this case was, that the vendor refused to give the purchaser any further information than was contained in the cost-book, so that he was ignorant of the tenure of the mines, whether they were leaseholds or freeholds.—Mr. Tillotson submitted, that the evidence showed that the vendor was fully aware that the mines were managed upon what, by the custom of the country, was known as the Cost-book Principle.

Mr. Romilly, in reply, endeavoured to point out the fallacy of giving importance to the word "adventure," in the particulars of sale. Assuming that this was merely a share in a joint-stock company, the vendor had failed in making out a sufficient title. The words of the particulars of sale were "part or share" in a mine; this expression was used in reference to each of the eight lots which had been purchased. No one could dispute that there might be a trading partnership in a mine, but the "cost-book" merely was not evidence of any such partnership. It merely contained the names of certain persons among whom the shares of profits were divisible; but it did not specify the terms of the partnership, nor show how it was constituted, or who had the right of management. "Kempson v. Saunders," 2 Car. and P., decided that, if a party sold a share in a manner not warranted by the original constitution of the company, such sale or assignment would not convey any interest whatever. How, in this case, could the purchaser of these shares know anything of the constitution of the title to the ownership of the mines by merely seeing names written in the cost-book, of which there was no mention in the conditions of sale?—The Vice-Chancellor asked for the papers, and reserved his judgment.

Mining Shares—Right of Refusal to Transfer.—In the Vice-Warden's Court, an important question was decided in the case "Brunton v. Hodge"—as to whether mining shares, when transferred, are subject to any other payment than that of back costs. The case was tried at the last sittings of the court in August. The defendants were the managing committee of South Wheal Francis, of which mine Mr. Philip Vyvyan Robinson was formerly the purser and a shareholder. In April, 1846, he ceased to be purser, and went to France; but before this, he executed a power of attorney to his son to sell the shares. The latter subsequently sold one share to the plaintiff "for a valuable consideration," of which plaintiff gave notice to the defendants, who stated that back costs were due on the shares, and they refused to enter the transfer to plaintiff in the cost-book. Plaintiff thereon offered to pay the back costs, and tendered, through his solicitor, a sum of money for that purpose, but defendants still refused to accept the transfer, and at the trial they brought evidence to show that there was an unsettled account between them and Mr. Robinson, and they alleged that he was the defaulter on coming to an account. They had, therefore, refused to accept the transfer of Mr. Robinson's shares, even though an offer had been made to pay the back costs on them as a condition of the transfer.—The Vice-Warden now delivered judgment in the case—he was of opinion that a mining adventure, such as that before the court, was not the same as an ordinary mercantile partnership, and was not subject to the same law. In the case of a mining adventure in this district, on the Cost-book System, the shares of each adventurer, by the universal practice of the district, may be transferred by the act of the holder (or by an act of law in the case of his bankruptcy or death), without the privity or consent of the body of adventurers, the transfer being subject to the payment of back costs on the share. Then came the question, was the transferee subject to any other condition—to the result of any accounts which the shareholder whom he succeeds had incurred with the adventurer as their customer, their servant, or their agent? He was of opinion that the transferee was *not* so subject. In the present case, therefore, the plaintiff has a right to have the memorandum of transfer to him entered in the cost-book, on the payment of back cost on the share; and the decree was, that reference be made to the registrar to ascertain the amount of back costs, in order that they may be properly paid before the transfer is registered.

Scotch Mining Statistics.—There are now about 100 blast-furnaces at work in Scotland, each of which will produce on an average 5000 tons of pig-iron a year, or altogether about 500,000 tons. For all the purposes connected with the manufacture of one ton of pig-iron, taking it in round numbers, there will be required about three tons of coal, 35 cwts. of calcined iron-stone, and 10 cwts. of lime. According to the restricted darg of the Lanarkshire colliers and miners, the labour of one man, supposing him to work the whole, will be equal to the produce of a raw material for 50 tons of pig-iron a year. The manufacture of pig-iron will, therefore, give employment to 10,000 colliers and miners. The manufacture of malleable iron in Scotland will be somewhere about 80,000 tons per annum, which will give employment to 1000 colliers, each ton requiring about four tons of raw coal for its manufacture. Altogether, this will give employment to 11,000 colliers and miners in the manufacture of iron alone in Scotland. For each man employed the population may be estimated at four, which will give a population of between 40,000 and 50,000. For supplying the consumption of Glasgow, 3000 colliers are required, and taking the whole of Scotland, the number of colliers and miners absolutely working will be about 30,000, and the population about 120,000. This is altogether independent of encostmen, labourers, mechanics, and others, employed in connection with our collieries and ironstone mines, which will give at least one-half more. The population, therefore, belonging to our coal and ironstone working cannot be estimated at less than 180,000, and is rapidly increasing every day. The quantity of pig-iron made has doubled within the last seven years, which must have added to the mining population above 20,000.—*North British Review.*

Sheffield Mining Company.—On Wednesday week, many of the Sheffield Lead Mining Company, visited their works at Eyam, and expressed their unanimous satisfaction at the progress made in their praiseworthy speculation. The level or adit is approaching the goal, and in an exceeding workman-like manner. It may be again repeated, that the all but certain success of this trial will cause innumerable speculations of a similar kind in the great mineral district of the Peak of Derbyshire.—*Sheffield Iris.*

Lead Mine at Hucklow.—This little village, in the vicinity of Eyam, has been for several years past the scene of turmoil and bitter contest, respecting the right of a lead mine, claimed by two parties. A widow of the name of Turner, is the principal of one party, and many shareholders comprise the other party. The most inveterate tenacity of assumed right has been exhibited on both sides, but the courage and determination of the widow (Turner) has excited general admiration. The very many brutal contests of the workmen on both sides, have induced every one to believe that deaths by violence will eventually ensue. At length this case must be decided: a trial in the court of the Duchy of Lancaster, took place last week, and in a short time the result will be known. A revision of mineral laws is greatly desirable.—*Ibid.*

Cwmavon Copper-Works.—The English Copper Company have given notice of their intention of reducing the wages throughout the whole of their extensive works at Cwmavon, to the extent of 10 per cent.—the reduction to take place from Monday. This step has created considerable dissatisfaction throughout the establishment; but we understand, that nearly all the old servants of the company are disposed to accept the employers' terms. Some of the colliers have expressed their attention of striking; but, taking into consideration the depressed state of the money market, and the absolute loss at present sustained in carrying on many of the gigantic manufacturing establishments of this country, we are confident the workmen will succumb to the pressure of the times, in the full confidence and belief, that when trade generally regains its usual elasticity, the employers will make a proportional advance in the rates of wages.—*Swansea Herald.*

Quarrying in Peel, Isle of Man.—We understand that two gentlemen from England have recently obtained a grant of Peel Quarry (the property of the Crown), from her Majesty's Commissioners of Woods, &c., and intend working it on an extensive scale.—*Liverpool Mercury.*

We are sorry to learn, that one of our largest and most respectable founders Mr. David Napier, of Camalachie and Parkhead Forge, Barony Parish, has been obliged to yield to the pressure of the times. His liabilities are stated to be about 40,000*l.* A great number of men may be thus thrown out of employment and many more of the same class will probably be added to the immense body of operatives now without work.—*Glasgow Chronicle.*

American Line of Steam-packets.—The *Dauntless*, steam-frigate, having received her engines, has removed from Mr. Napier's wharf; and the *America*, one of the new line of New York and Liverpool steam-packets, has taken her place, in order to be fitted-up in a similar manner. We observe that another vessel belonging to this line has been towed up from Greenock, and is now lying at Lancefield quay. She is named the *Niagara*, and is an exact counterpart in every respect to the *America*, being built by the same gentlemen—Messrs. Steele and Co., of Greenock. Both vessels are of a beautiful model, and will, when thoroughly fitted out for sea, do credit, doubtless, both to builder and engineer.—*Glasgow Constitutional.*

Holloway's Pills—Extraordinary Cure of Asthma.—Jeremiah Casey, residing at No. 1, Compton-place, Brunswick-square, had suffered from a chronic asthma for more than three years. This poor man was so great a sufferer, that he did not dare to go to bed for fear of the phlegm choking him: indeed, he could not even lay his head upon the table for half an hour, lest he should be suffocated. Nevertheless, this person is now labouring from morning to night—sleeps as well as ever he did in his life; and, in fact, is completely cured by the use of Holloway's ointment.—Sold by all dealers in medicine, and at Professor Holloway's establishment, 244, Strand, London.

INSTITUTION OF MECHANICAL ENGINEERS.

[FROM OUR CORRESPONDENT.]

The adjourned quarterly meeting of the members of this Institute was held in Birmingham, on Wednesday last, for the purpose of transacting the remaining quarterly business. In the absence of the president (George Stephenson, Esq.), Mr. J. E. M'Connell (vice-president of the Institute) presided. There were also present Charles Gough, Esq. (Mayor of Birmingham), Mr. Charles Beyer and Mr. Ramsbottom (of the firm of Sharpe, Brothers, and Co., Manchester), Mr. Archibald Slate, Mr. E. A. Cowper, Mr. Buckle (of the Soho), Mr. W. S. Garland (Soho), Mr. James Brown, Mr. A. B. Cochrane, Mr. J. E. Clift, Mr. Alexander Allan (of Crewe), Mr. Thomas Craddock, Mr. J. R. Bolton, and Messrs. W. Lea, J. Samuels, G. Selby, F. Wills, S. Thornton, E. N. Martin, J. W. Wilson, G. Caird, Geord Smith, Thomas Richards, George Skinner, G. A. Everett, J. Hughes, Robert Broad, J. Horton, J. H. Bielby, &c.—The Chairman opened the business of the evening, by intimating that, in consequence of the unavoidable absence of the president, the council of management had resolved to adjourn the discussion on "Railway Breaks" till the next meeting, in order to afford that gentleman an opportunity of taking part in it. The next paper in order was,

A Turn Table Lathe, by Mr. A. Slate, which was read by the Secretary (Mr. A. Kintrea), as follows:—

"The drawing (which accompanied the paper) represents a turn-table lathe, capable of turning 36 ft. in diameter, with 14-feet driving-wheel, intended to be erected in an old cinder heap. As the foundation is not to be depended on, I have formed a gauntress for the lathe of three old girders, weighing about 9 tons each; two of these support the head-work, and the third carries the slide-rest in front of the pit. The two girders under the head-stocks rest in wood, bedded in concrete, and are held together in the centre by 2½ bolts through cast-iron distance-pieces, and filled up between by concrete above the wood, so as to make a solid mass. The three girders are joined at the end by two cross-plates of cast-iron, making the whole into one frame. On the middle frame are placed two slides, bearing on the face-plate, to take off the jar when turning large diameters. The main questions for consideration are the comparative steadiness of a lathe so fixed and advantage of the girders."

After the reading of the paper, Mr. Slate observed, that as the lathe was to be erected on an old cinder bank, by having it based on the firm cast-iron centres proposed, in the event of the bank slipping, that the whole lathe would slip likewise, and be still useful at whatever angle it might be. In reply to questions, Mr. Slate stated, that the diameter of the arms was 10 ft., the thickness of the face plate 2 in., and 13 ft. 4 in. from outside of the arms to centre of the face plate, which was in two parts, the centre part being cast in one piece, 14 in. diameter, and the outer piece fitted on in segments, with a continuous ring, with a guide ring for the slides. The face plate was keyed upon arms 4 ft. 6 in. diameter, projecting over the end of the spindle, and bolted to the flange on the spindle, with counter sunk bolts.—Mr. Cowper asked, if Mr. Slate anticipated any tremor between the face plate and the arms keyed on the spindle?—To which Mr. Slate replied, that he did anticipate a slight tremor on the tool, as at so large a diameter it was scarcely possible to construct a lathe that should turn without any tremor.—The Chairman remarked, that in consequence of the increased length of the engines now used, it was frequently found necessary to have turn tables 40 ft. in diameter.—Mr. Cowper observed, that he had found an advantage in a planing lathe in segments, and gave a description of a lathe at the works he was connected with—viz., the London Works, near Birmingham—that was capable of turning large diameters, and of which the face plate was keyed on arms similar to the one described by Mr. Slate.—Mr. Slate again remarked, that the object of framing the lathe in one mass was, in case of it slipping, to still provide for its usefulness.—Mr. Cowper observed, that the framing was, in itself, very good, but that, in his opinion, it would not prevent the tremulous motion. The only plan he could see to prevent which, was fixing the lathe, and also the slide rest, upon a solid weighty foundation, as in the present instance. He thought, in practice, the girders would be getting loose.—Mr. Slate remarked, that the weight of the lathe alone was 50 tons, and would, in itself, tend to counteract, in a great degree, any tremulous motion.

Mr. Buckle observed that, in his opinion, the principal cause of the tremor of a lathe, which produced that wavy cut upon the work, so desirable to avoid, was in consequence of its being driven by spur-wheel gearing, and which the use of the screw and worm-wheel would tend to counteract. He had frequently, at a small lathe, driven by screw and worm-wheel, turned articles 15 ft. diameter, with scarcely any sensible motion.

Mr. Beyer remarked, that the comparative advantages of the spur-wheel gearing, and that of the screw and worm-wheel, were not worthy of consideration. He, however, preferred the spur-wheel gearing; but the one cause of tremulous motion, was the parts of the lathe not being properly secured, and made firm. The lathe under consideration, however, appeared to answer the purpose, as far as the spindle and face-plate were concerned; and, if anything was wrong, it would be found in the slide rest—for he could not agree with Mr. Buckle, that the different modes of gearing made any difference.—Mr. Buckle replied, that it was the general practice of turners to support the tool as near the edge as possible, and never to allow it to project over.—Mr. Beyer coincided in that opinion, and mentioned an instance at the works he was connected with, where a turner had the cutter projecting about 2½ in., and could not possibly obtain a smooth cut; but upon his placing the cutter farther in the holder by his (Mr. B.'s) directions, the work was turned perfectly smooth.—Mr. Cowper considered, that a cut, one-eighth of an inch deep, or five-eighths, was sufficient for any purpose, and it was not advantageous to cut more at once.—Mr. Ramsbottom observed that, from inspecting the drawing, it appeared to have a peculiar power of compensation—for, in removing the tool to a distance, it would still be firm. There was a kind of rock under the tool, which was a valuable property.—After some further discussion upon the subject, it was ultimately concluded, by the expression of a general opinion, that the lathe was worthy of general use—some of the members, however, preferring the screw and worm-wheel, and others the spur-wheel gearing.

Locomotive Engines for Luggage Trains.—Mr. Beyer introduced a number of well-executed drawings, illustrative of improvements in locomotives for luggage trains, made by the firm he was connected with. He gave a description of the *Atlas* engine, made for the Sheffield and Manchester Railway, which had performed a great amount of work, with a smaller consumption of coke, than any engine on the line, under similar circumstances. From May, 1846, to October, 1847, it had passed over a distance of 40,222 miles, with a considerable less consumption of fuel than any other engine. They had also made five other engines, varying only from this in the number and diameter of the boiler tubes. From experiments made with them on the Manchester and Birmingham, and the London and North-Western lines, the results had proved equally satisfactory. One experiment was made with a train, consisting of 101 waggons—the total weight of which was 597 tons, conveyed from Langsight to Crewe, a distance of 29 miles, at the average rate of 13·7 miles per hour.

After the reading of the papers and examination of the accompanied drawings—without which a minute description would be of no avail—the Chairman, in expressing his opinion on the merits of the engines, remarked that, as far as his experience went on the line with which he was connected (the North Western), he had paid particular attention to the working of these engines, and had found them much superior to half the ordinary luggage engines on the lines. The manner in which the engine had worked, and the small amount of repairs needed by it, showed very plainly that the plan, construction, and the quality of the materials, were of the best description—for it had given less trouble in repairs, and yet done more work, for the amount of expenditure, than any engine they had performing the same kind of duty. The provision made for the expansion of the boiler, was one point of the greatest service in these engines; but the whole arrangement of the valve gearing, the framing, and the cylinders, reflected great credit on the party who designed her—for there was no weight thrown away for the fire-box and tubing surface.

Mr. J. E. Clift observed that, from an inspection of the diagrams, it appeared to him there had been a great amount of wear upon the tyre of the wheels. Was not this owing to the immense weight of the engine? Were not such heavy engines exceedingly dangerous to travel with? He supposed that was why such engines were used for luggage trains, and not for passenger ones?—The Chairman replied that, when it was stated that the distance of 40,222 miles had been traversed, the proportion was very small, for the distance was equal to three years' work.

In answer to questions put, Mr. Beyer remarked, that the tyre had not been once turned during the running of the 40,222 miles; but they would be turned before working again.—The Chairman inquired, if the amount of resistance in the smoke-box had ever been subjected to experiment?—Mr. Ramsbottom said, he had made many experiments, in connection with Mr. Beyer; but was not then prepared to state the results.—The length of the tubes caused a great resistance, in which remark the Chairman concurred.—The discussion having terminated, Mr. Buckle proposed that the valuable papers, accompanying drawings, and tabular statements, so kindly presented to the institution by Mr. Beyer, be printed, and a copy forwarded to each member, which was seconded by Mr. Cowper, and passed unanimously.

Mr. Cowper then made some few observations upon the plan for a "Suspension Bridge," read by him at the last meeting, when the following paper on "Jones's Gas Exhauster," from Mr. E. Clift, as a substitute for the fan blast, was read, and is as follows:—"Jones's gas exhauster is a machine invented for the purpose of taking the gas from the retorts as fast as it is generated, and forcing it into the gas-holders in order to relieve them of the backward pressure. It has been at work for the last four years in many large manufactories with great success; and it has occurred to me that it might be used with equal advantage as a substitute for the fan in blowing cupolas or smithies. The machine consists of a spheroidical case, flat-sided, into which are fitted two revolvers of a peculiar shape, which turn on separate axes, and are so fixed in relation to each other that in every part of the revolution there must be a complete separation between the air on one side of them and that on the other. Motion is given to these revolvers by means of a pulley upon the axis of the lower one, on the other end of which axis is a toothed wheel of equal numbers on the end of the axis of the revolver, thus causing them to work in perfect uniformity. The action of the apparatus is precisely that of two pistons working within two chambers, alternately opening and closing at each revolution a quantity of air equal to the contents of each chamber. As there is no data of the quantity of air that a fan of a given size will discharge, I cannot compare the efficiency of the exhauster with it; but when I see that the best constructed fan, at its greatest velocity, will only maintain a density of air equal to a column of water of 10 in., or a pressure of about 15 ozs. on the square inch; and that the exhauster will maintain a density of 50 in., or about 75 ozs. on the square inch, and that with a comparatively small amount of power, I am led to believe that some advantage exists in the exhauster over the fan. In an experiment I recently made with an exhauster 2 ft. long, 1 ft. 6 in. across, and 1 ft. pipes, I found I could discharge 30,000 cubic feet of air per hour, with a constant revertance of 15 ozs. on the square inch. This (according to the theory of remelting iron in a cupola, which allows 36,000 cubic feet, or 2700 lbs. of air to one ton), would be nearly equal to one ton of iron per hour, and with an expenditure of not more than two-horse power. This quantity, of course, could be considerably increased by using a larger-sized exhauster."

Mr. Clift observed, that the "exhauster" was a spherical figure, in which curved figures were revolved in different directions. The air, on being admitted, was drawn in, and a portion of the chamber was filled, each revolution. Each revolution also ejected a portion of air equal to half the size of the chamber, which air was driven into the funnel leading to the holders. It had been in use for four years for exhausting the gas from the retorts, and had frequently exhausted 30,000 ft. per hour, with a pressure of 15 in. of water, or 22½ ozs., on the square inch, with a small steam-engine of 6-horse power, and which worked two pumps in addition to the exhauster. He (Mr. C) had ascertained that the exhauster took only 2-horses' power to drive it. He was aware that atmospheric air would take more power, as its specific gravity was greater than gas. It had occurred to him, that the stream of air being continuous, and capable of regulation, in its quantity, and also certain in its action, that it would be effectual as a substitute for the fan blast. He might observe, there was now a machine in the course of erection in Birmingham, large enough to work a large cupola, and one was also in use at Messrs. Elkington, Mason, and Co.'s Works, also in Birmingham, for the purpose of supplying the blow-pipes in the manufactory with blast for soldering with. It was put in the place of an old fan blast, and was found to answer the purpose much better. The exhauster was now being brought into general use for that purpose; and he had no doubt that larger ones would eventually be used for smelting purposes. The exhauster he spoke of was very small—being only 2 ft. long, 1 ft. 6 in. across, and 1 ft. apertures, for the egress and ingress of air.—Some questions were then put to the gentleman relative to the data he had used in calculating the amount of power required to work the exhauster. The answers given did not, however, appear to satisfy.

Mr. Buckle, who observed that the quantity of air thrown out was not one-eighth as much as a very small sized fan would throw; he exhibited a small sectional wood model of the exhauster, and contended that it was only available for heavy densities, when required in very small quantities. By the wheels for driving being 16 inches diameter (he continued), the circumference was rather over 4 ft. 6 in., multiplied by 600 revolutions per minute (the rate at which the exhauster worked), gave 2000 ft. per minute for the rate at which the pitch lines of the wheels revolved, and it would be found, by comparing the table of his fan-blast in one experiment made, that there was sent out 30 cubic feet per second, or 1800 ft. per minute, for four horses power used to drive the fan with. Every revolution the exhauster made would only drive out a certain portion of air, to say nothing of leakage; of which, even if the machine was made quite air tight at first, still the wear and tear of the axles, combined with different other causes, would soon make a severe leakage. He would remind them, that the blast necessary to furnish two air furnaces, producing 120 tons of pig-iron per week, from a blast cylinder 90 inches diameter, and 8 ft. stroke, was 11,378 cubic feet of air per minute, and it took a 90-horse steam-engine to work the blast cylinder with. The exhauster was admirably calculated to exhaust gas, where quantity was not an object, but they could not get so much out of it as from a fan blast. He then went into a statement to show that the rate of speed required to run the wheels at, to produce even sufficient blast for an ordinary cupola, was so terrific, that it could not possibly be reduced to practice.

The discussion was continued with some warmth on the parts of Mr. Clift and Mr. Buckle, and was ultimately adjourned till the exhauster, said by Mr. Clift to be in course of erection, was completed, when practice shall demonstrate the accuracy or inaccuracy of Mr. Clift's theory.

One other paper was read from Mr. Smith, of the Vulcan Works, West Bromwich, on a Steam Helve, which the principal feature was economising the steam, by having a small engine to work the force pump during the heating of the iron undergoing the process of forging, and so reserving the steam, till the work was ready to commence upon. The mode of action was by means of a steam cylinder, placed directly over the head of the hammer and the piston of the cylinder, connected to the hammer; the steam was applied to lift the hammer up, which descended by its own weight on the work.—The general feeling of the meeting was, that the proposed plan was feasible, and merited a further trial.—The Chairman then intimated, that their next meeting would be held in January, for the transaction of the annual business, when several important suggestions, for the still further carrying out a plan of communication between guards and drivers of railway trains, would be brought forward.

The thanks of the meeting were awarded to the chairman, and to those gentlemen who had contributed papers, after which the meeting adjourned till January.

WHEAL LAWRENCE COPPER MINE, BRIDFORD,

IN THE COUNTY OF DEVON.

TO BE WORKED ON THE "COST-BOOK" PRINCIPLE.

The mine to be divided in 1024 shares, 200 of which are at the disposal of the committee, at £2 2s. per share—the proceeds whereof will be appropriated to the working of the mine.

PROVISIONAL COMMITTEE.

HENRY WESTON, Esq. | JAMES GRAY, Esq.
FRANCIS T. RODD, Esq. | ROBERT H. DAVY, Esq.

Mining Engineer—Mr. Henry James.
Purser (pro tem.)—Mr. Lewis, Exeter.
Secretary (pro tem.)—Mr. N. Taperell, Exeter.
London Agent—William Henry Smith, Esq., 16, Angel-court, Throgmorton-street.
To whom application for Shares may be made.

BANKERS.

The West of England and South Wales District Banking Company, Exeter.
Messrs. Glyn and Co., London.

PROSPECTUS.

Wheal Lawrence is situated in the parish of Bridford, in the county of Devon, about seven miles north-west of Exeter. This valuable and extensive mining sett has been recently granted, by Sir L. V. Palk, Bart., at one-fifteenth dues, for a term of 21 years. This sett joins the Wheal Anna Maria on the west, and extends nearly one mile east from it, on the course of the lodes, and about half a mile wide from north to south. It is considered, that the south lode runs into the lands of the Rev. Richard Stevens, of Culverhouse, from whom a sett has been obtained, on the same terms as Sir L. V. Palk's.

The lodes in Wheal Lawrence, going east, make themselves in a very high hill, and will, by driving 100 fathoms on the course of them, get from 20 to 30 fathoms backs.

The lodes average in size about 5 feet wide, and are of the most promising appearance. Excellent stones of rich yellow and black oxide copper ore, have been produced from the lodes at a depth of 7 feet, and there can be no doubt of their producing a great quantity of copper ore above the level of the river. From the geological survey of Sir H. T. De la Beche, Knt., it can be seen that Wheal Lawrence and Wheal Anna Maria, are situated in precisely the same sort of strata as the celebrated copper mines near Tavistock.

A general meeting of the shareholders will be convened as early as possible, and all the preliminary business arranged as to the future working of the mine. The operations of the company will be carried on under the Cost-book Principle, and no shareholder will be liable for any expenses incurred after the relinquishment of his or her shares.

REPORT.

To the Committee of Management of Wheal Lawrence Copper Mine.

Gentlemen,—According to your request we beg to hand you a report of the Wheal Lawrence Copper Mine, in the parish of Bridford, Devon. There are seven east and west lodes, running through this extensive mining sett. Three of them we have opened, and sunk a few pits. The first we sunk on, is a lode 11 ft. wide, made up with gossan, mundic, soft spar, and some very good stones of rich yellow copper ore. The second lode is about 3 ft. big, of a very kindly appearance, producing some excellent stones of copper ore, and rich stones of silver-lead ore, with gossan, peach, mundic, &c. We, therefore, think that the great cross-course comes on very near to where we have cut this lode, and that makes it produce the silver-lead; if so, there cannot be much doubt of the east and west lode producing a large quantity of copper near the cross-course. The third lode is about 5 feet big, with gossan, spar, mundic, and copper ore. We have commenced cutting leats to bring home the water to work our machinery, for the pumping the water from the mine. We intend to sink on the lode named first in this report, and that shaft will command five of the lodes by driving cross-cuts from one to the other. We hope to finish our machinery in three weeks from this time, when we shall commence sinking. We purpose to sink 15 fathoms, and cross-cut all the lodes, and from the very encouraging appearances at or near the surface, we consider that we may safely calculate on having some good bunches of copper ore at this level. From all the indications, we feel that we are justified in saying we shall have a good mine. HENRY JAMES, } Mining
Dated Nov. 13, 1847. THOMAS MOYLE, } Engineers.

THE PATENT OFFICE AND DESIGNS REGISTRY,

No. 210, STRAND, LONDON.

INVENTORS will receive (gratis), on application, the OFFICIAL CIRCULAR OF INFORMATION, detailing the eligible course for PROTECTION of INVENTIONS and DESIGNS, with Reduced Scale of Fees.

Messrs. F. W. CAMPIN and CO. offer their services, and the benefit of many years' experience, in SECURING PATENTS and REGISTRATIONS OF DESIGNS, with due regard to VALIDITY, economy, and dispatch—assisted by scientific men of repute.

Also, in MECHANICAL and ENGINEERING DRAWINGS, whether connected with Patents, Railways, or otherwise, by a staff of first-rate draftsmen.

Application personally, or by letter, to F. W. Campin and Co., No. 210, Strand (corner of Essex-street).

PATENT IMPROVEMENTS IN CHRONOMETERS,

WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 18 6, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each.

DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

NEW PATENTS.

W. Reid, University-street, Middlesex, for certain improvements in communicating intelligence by electricity, and in the instruments and apparatus employed therein.

G. P. Swinbourne, Pimlico, Middlesex, gent., for certain improvements in the manufacture of gelatinous substances, and in the apparatus to be used therein.

R. Cook, Kennington, Surrey, chemist, for improvements in the combustion of fuel, and in applying the heat so obtained.

E. Travis, Oldham, Lancashire, cotton-spinner, for improvements in looms for weaving.

G. Holgate, Spring Hill, near Bromley, Lancashire, cotton-spinner, for certain improvements in power-looms.

P. P. C. Barratt, Paris, in the kingdom of France, for improvements in machinery for tilling and working land.

T. Walker, Hanley, Staffordshire, for a new and valuable mode of decorating articles of earthenware and china.—*Mechanics' Magazine.*

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Adair's Main 16 6—Hedley's Hartley 18—Hasting's Hartley 19—Holywell Main 16 9—Bewicke and Co. 20 6—Killingworth 20 6—Belmont 21—Haswell 21 3—Hetton 21 3—Lambton 21 3—Denison 20—Tees 21—West Pease 18—Cowpen Harley 19—Howard's West Hartley Netherton 19—Sidney's Hartley, 19—Elgin 18 9—Tanfield Moor 17 9.—Ships at the market, 28; sold, 20.

WEDNESDAY.—Hedley's Hartley 18—Hasting's Hartley 19—New Tanfield 16 9—Tanfield Moor 17 6—West Wylam 17—Wylam 17 6—Wall's End Belmont 21 3—Lambton 21 6—Howard's West Hartley Netherton 19—Snapethorp 19 9—Sidney's Hartley 19—Elgin 18 9.—Ships at market, 11; sold, 8.

FRIDAY.—Adair's Main 17—Chester Main 18 6—Holywell Main 18 6—New Tanfield 16 9—Ord's Redheugh 16 6—Tanfield Moor 17 6—West Wylam 17—Eden Main 20 6—Gwaun Cae Gurwen Anthracite 32—Howard's West Hartley Netherton 18 6—Wall's End Acorn Close 20—Bewicke and Co. 20 3—Clennel 18 9—Gosforth 20 3—Heaton 20 3—Hedley 20 3—Northumberland 19 6—Bell 20 9—Belmont 20 9—Braddyll's Hetton 21—Haswell 21 3—Hetton 21—Lambton 20 9—Russell's Hetton 20 9—Stewart's 20 9 to 21—Whitwell 20 6—Caradoc 20 9—Hudson's Hartlepool 20 6—Richardson's Tees 19 9—Harton 20 3—Seymour Tees 20 6—Tees 21—West Hetton 20 3.—Ships at market, 84.

New Coal Exchange, Lower Thames-street.—The building now being erected, from the designs of Mr. Bunning, the architect to the corporation, is arranged so as to give an increased width to the thoroughfare of St. Mary-at-Hill and Lower Thames-street, and presents two distinct elevations, connected by a circular tower, 100 ft. high, within the re-entering angle formed by the two fronts. The front of the whole is to be faced with Portland stone. The building will contain on the ground-floor, in addition to suites of offices, an area of upwards of 4000 superficial feet for the meeting of the merchants, including a circle, 60 feet in diameter, the whole height of the building, covered with a glazed dome of cast-iron ribs, supported on each story by ornamental cast-iron stanuncheons. This, from its magnitude and novelty of design, will form a prominent feature of the building. The height from the floor to the top of the dome will be about seventy feet. There are likewise provided suites of spacious well-lighted offices and committee-rooms, occupying four stories of the building, for the accommodation of the merchants, factors, and meters; the accesses to them being by projecting galleries, of fire-proof construction, within the circle under the dome. The cost of the building will be about 36,000*l*. Mr. William Trego is contractor for the erection of the building, excepting for the founder's work, which is to be executed by Messrs. Drewer, of Old-street.—*The Builder.*

TIN VALE MINING COMPANY, ST. NEOT

COUNTY CORNWALL.

1000 parts, or shares, of £2 per part, or share.

NOW AT WORK ON THE "COST-BOOK" PRINCIPLE.

CHAIRMAN.

ROBERT OWEN ALAND, Esq., Cambridge-terrace, Hyde-park.

DIRECTORS.

JOHN FOSFORD OSBORNE, Esq., Ardleigh Park, Colchester.
JOSEPH CARRINGTON RIDGWAY, Esq., Roehampton Lodge, Roehampton.
BENJAMIN FORRESTER SCOTT, Esq., Northampton Park, Ball's Pond.
BARTHOLOMEW DAWES, Esq., Soho-square.
Captain THOMAS ROSE, Waterloo, Northampton.
WILLIAM W. MANSELL, Esq., *Purser*, Dorchester-place, Blandford-square.

Captain of the Mine.—Mr. John Floyd, Harrowbridge.
Solicitor—John Butler, Esq., 134, Tooley-street, Southwark.
Bankers—Messrs. Ransom and Co., London.

PROSPECTUS.

This mine sett is situate at Harrowbridge, in the parish of St. Neot, in the county of Cornwall, on the banks of the Drains River, and extends over about 200 acres of mineral land. It is held on lease for 21 years, from the lords of the manor, at a royalty, or due of 1-15th, and totally free from sleeping or dead rent.

Five tin lodes, underlaying south, have already been opened. A shaft has been sunk about 10 fathoms, and two adits driven—one about 80 and another 20 fathoms. The first lode in the chief adit, marked A on the map, has already been opened 10 fathoms to the east, and about 20 fathoms to the west, on the course of the lode, from which ore is procured, and a considerable quantity is now on the bank, ready for stamping.

The second adit, marked B on the map, has been driven 30 fathoms on the course of a lode, of most promising appearance.

Five pairs of stamps are in course of construction, as well as all necessary machinery for carrying on the works efficiently; and Captain Floyd asserts that returns will be made before Christmas.

The ore is of the best description, being free from compound.

The tin streams are considerable: they have been secured also for the company, at a royalty, or due, of 1-12th, and arrangements have been made for working them on tribute.

The freehold of land, sufficient for the erection of workmen's cottages, has likewise been obtained, and the quantity of granite which abounds in the locality renders building cheap.

The operations of the company are carried on under the "Cost-book" Principle, which exempts the company from the provisions of the Act for the Registration of Joint-Stock Companies (7 and 8 Vic., cap. 110), the 63d section of which enacts—

"Provided always, and be it enacted, that nothing in this Act contained shall extend, or be construed to extend, to any partnership formed for the working of mines, minerals, and quarries, of what nature soever, on the principle commonly called the Cost-book Principle."

Under the "Cost-book" Principle, shareholders have the right of determining their responsibility, by giving notice of their intention to relinquish their shares, and on forfeiture of all previous payments. The 15th clause states—

"That any adventurer, or shareholder, may determine his or her responsibility or liability to the affairs of this mine, upon his or her giving notice, in writing, to the purser of the company for the time being, of his or her desire of retiring from the company; and, also, upon depositing with the said purser the share or shares held by him or her, and signing a relinquishment of all claims or demands on the company in respect to such share or shares."

The directors, after considerable negociation, have succeeded in effecting the following arrangement, which they consider highly advantageous to the company—namely: That the present lessees, in consideration of the transfer of the lease to the company, for the machinery in course of erection, and for the works hitherto effected, to be paid the sum of £1000 cash, and to have one-tenth of all profits arising from the mine, until a further sum of £1500 shall have been paid to them; the company having the option of cancelling the latter disbursement on payment of the sum of £1000 on or before the 29th of September, 1848.

Applications for shares to be made to the purser, W. W. Mansell, Esq., at the temporary offices of the company, 17, Dorchester-place, Blandford-square; John Butler, Esq., solicitor to the company, 134, Tooley-street, Southwark; James Lane, Esq., mining sharebroker, 75, Old Broad-street, city; and Messrs. Oliver and Co., stock and share brokers, Coggeshall, Essex—where prospectuses and every information may be obtained; also at the office of the *Mining Journal*.

Report of Captain W. M. Whitford, April 27, 1847.

The above mine is situate in the parish of St. Neot, contiguous to the celebrated Drain River, on the well-known estate of Harrowbridge, embracing a spacious and extensive valley, bounded on the west by high hills, of a pleasing and graceful declivity. The bottom, or valley, has been streamed for tin during the lapse of ages, and yet its stores are unexhausted. During the last week, a quantity of tin was sold from these mines, which was raised by streamers, and obtained the high price of £67 10s. per ton. Several promising lodes have been intersected by these streamers, of a very beautiful and rich appearance, which they were inadequate to pursue to any considerable extent. An adit has been driven about 70 fms. through a granite stratum which is perfectly congenial for tin—several rich branches having been cut in this cross-cut, which will come in contact with the lode in driving west, at which point (reasoning from analogy) we expect a fine course of tin. Rowe's lode is about 40 fms. beyond the cross-cut; it was sunk on to the depth of 8 or 9 fms., where it was 4 ft. wide, richly spotted with tin; but an influx of water prevented the parties from sinking deeper. The very promising character of this lode was the principal inducement to commence the adit; and it is highly probable that more lodes may be cut in driving this adit, as it is a new and unbroken piece of ground. A quantity of tin has been raised from the branches referred to in the adit, which is still to be seen in the mine. There are several collateral advantages in connection with this speculation, which ought not to be omitted, and which are of vast importance to the interest of this mine:—1. The superior quality of the tin.—2. The softness of the ground.—3. The abundance of water, sufficient for any kind of machinery. From the whole, I believe it to be a first-rate speculation.

Report of Captain John Floyd, September 2, 1847.

The first adit level is driven south 90 fms., and intersected the north tin lode in the east and west ends; it is 2 ft. wide, producing good tin; the remainder part of the lode (exclusive of the tin) is quartz, mica, and black capels, which composition is the forerunner of abundance of tin; the said ends will now pay for working.—I mean, pay its own cost; the ground by the side of the lode is soft granite, and can be driven or worked for the low price of 30s. to 60s. per fm., and very little good tin will pay the expenses, but in the said lode there is a great portion of good tin. From the north lode the adit level is continued on south 8 fms., and cut the middle tin lode, which is 3 ft. 6 in. wide, and, in a word, exactly the same properties as the north lode. From the middle lode, 15 fathoms further south, there is the great south tin lode; a shaft is sunk down about 10 fms., which has cut the lode in the shaft 6 ft. wide, producing very large quantities of tinstuff; the said tinstuff that was taken up from the lode in the shaft is now to be seen on the surface; we have to sink on the course of this lode 34 fms., to have a communication with the adit level that will make the mine between 40 and 50 fms. deep at the adit level—so you can see what high tin ground there will be to work on; and, it is my opinion, we shall make large returns of good tin from the great south tin lode above the adit level, exclusive of the north and middle tin lode. We have also driven another adit, marke B, 30 fms. due west on the course of a recently discovered tin lode in the central part of the sett—the lode is most promising; it is 3 ft. 6 in. wide, making two regular walls, composed of blue capels, mica, quartz, and tin. It is my real opinion that, when we have driven 50 fms. further to hill, we shall intersect the great saunter lode, where we shall have abundance of tin; the strata on each side of the lode is a beautiful granite—good standing ground. We are paying £2 10s. per fathom for driving. The tin raised in this district is superior to any other part of the country, and realised the best price. There are many other lodes on the sett, which is very extensive, and there is sufficient water-power for machinery, which will effect a great saving, for no steam-power will be wanted. The roads are good, and the mine is not far from the smelting-house.

We, the undersigned, deeming it our duty, before putting forth the foregoing prospectus, to satisfy ourselves as to the correctness of the statements therein contained, have lately visited the mine sett; and, after the most diligent investigation into its position and capabilities, have much pleasure in bearing testimony of our belief and confidence in the accuracy of the preceding reports of Capt. Whitford and Capt. Floyd. The mine is even at present productive; and, when the erection of the necessary machinery for crushing, &c., now in course of progress, is complete, very beneficial results to the shareholders may be fairly calculated on, and that within a limited period. The proposed capital of £2 per share will, in our opinion, be more than sufficient to carry out all arrangements and fully to test the value of the property. The ore is of the best description, as shown by the annexed certificates of Mr. Mitchell, and the mine is situated in the tin district of Cornwall. We brought up with us specimens taken promiscuously from the mine, which have been submitted to that gentleman, who reports as follows:—

"The metal produced from them is excellent—the ore being free from extraneous metallic matters. The samples from adit A and B are very rich."

"This is to certify, that I have examined a sample of tin ore, marked 'streams,' and find it contains *fifty-two per cent. of metallic tin.*"

"This is to certify, that I have examined a sample of tin ore, marked 'adit A,' and find it contains *sixty-eight per cent. of metallic tin.*"

"This is to certify, that I have examined a sample of tin ore, marked 'adit B,' and find it contains *seventy-one per cent. of metallic tin.*"

(Signed) "JOHN MITCHELL,

"23, Hawley-road, Kentish Town, Nov. 1, 1847."

Mr. John Paull, of Tavistock, mining engineer, in his report on Dartmoor Tin Mines, April 7, 1847, says—"I shall first direct your attention to the fact, that the tin raised in this sett is of a superior quality to that of any other mine in Devon—being best grain tin, the market value of which is full £15 per ton more than that of common tin;" and Dr. Ryan, of the Polytechnic, in respect of the ore, remarks, that "the sample of 'tin ore' from the 'Dartmoor Consols Mine' gives, on analysis, 34 per cent. of metallic tin. You must consider this, then, as a most excellent and productive lode." The Tin Vale Mine, which yields 68 and 71 per cent., or more than double that of Dartmoor, which is declared to be so rich, may, therefore, be justly considered a "first-rate speculation," as designated by Capt. Whitford.

ROBERT OWEN ALAND,
BARTHOLOMEW DAWES,
JOHN BUTLER,
WILLIAM W. MANSELL.

Nov. 2, 1847.

VIADUCTS AND OTHER RAILWAY WORK.—The attention of Railway Engineers, Architects, and Contractors is particularly directed to the great advantages to be derived from the application of SEYSSEL ASPHALTE, as the *only impervious and permanent* covering for arches and roofs, and lining of reservoirs, gutters, &c. The arrangements of CLARIDGE'S PATENT ASPHALTE COMPANY enable it to execute works of any extent with the greatest promptitude.

In order to guard against the use of spurious materials, it is important that all applications for works to be executed be made direct to this company; and, as a further protection, it is suggested that Engineers, Architects, and Contractors, should require a CERTIFICATE from the company that the proper description of material has been used.

Information may be obtained as to all works which have been executed by the company since its establishment in 1838, which will prove that the failure of many works represented to have been done with the genuine material has resulted from the substitution of a spurious one.

I. FARRELL, Secretary,
Seyssel Asphalte Company, Stangate, London.

London:—Printed and Published, weekly, by Henry English, at the Office, No. 26, Fleet-street, in the city of London, where all Communications and Advertisements are requested to be forwarded—addressed to "the Editor"—post-paid. November 27, 1847.

*** It will at all times save much delay and inconvenience, if communications are directed simply To the Editor, *Mining Journal Office*, 26, Fleet-street, London.

And Post-Office Orders, &c., must be made payable to William Salmon Mansell, as acting for the proprietors.